American MARCH . 1961 25 CENTS TUIL Grower TUIL Grower

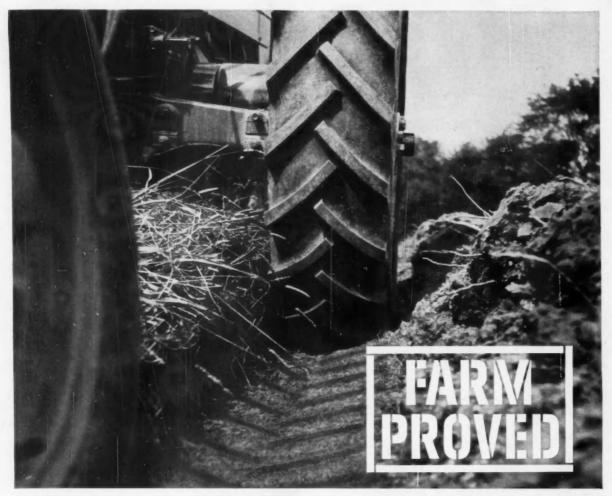
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Our Fruit Pioneers—Part 1 on Fruit Breeding in the U.S.



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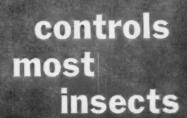


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FARMER APPROVED



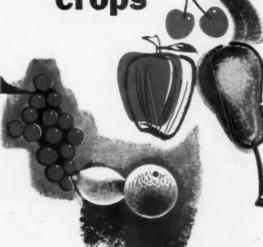
John Martin, foreman of Berverdor, Inc. farm, Tracy, Calif., says: "You tell me a tire that'll outpull a Firestone and I'll tell you that tire doesn't exist. Firestones clean out and grip best in our abrasive clay. And I know a call to Cox Bros., our Firestone dealer, will bring fast service."





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Cover photo by Heilman shows peach blossoms in the orchard of Willis Shenk, Litits, Pa.

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automatic weight transfer. The way it economically adapts to light and heavy work. Third, by the tremendous versatility of this all-job diesel. It comes with swinging drawbar, two-stage clutching and live PTO. It doubles as a 4-plow lugger. Handles spraying, any PTO job with ease. Even has a differential lock

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LETTERS TO THE EDITOR

Is Mrs. Wedgworth the First?

Dear Editor:

Page 41 of your January issue shows a photograph of Mrs. Ruth Wedgworth, newly elected president of Florida State newly elected president of Florida State Horticultural Society, with a caption stating she is the first lady president in the history of the 38 state horticultural organizations in the United States.

Mrs. L. M. Hockett, of Marshalltown, served as president of Iowa State Horticultural Society in 1959. She won the

esteem and respect of all who worked with her and was re-elected to a second term in 1960. Mrs. Hockett is a National Accredited Judge and serves in that capacity at many

of our garden club meetings.
The Iowa State Horticultural Society
was organized in 1866. There are nine other organizations in Iowa that are affiliated with the state hort society. Iowa State

Fruit Growers Association is one.

Cecil J. Baxter, Past President
Iowa State Fruit Growers Assn.
Fort Madison, Iowa

Dear Editor:

Mrs. M. B. Kannowski, former park superintendent of Grand Forks parks for

superintendent of Grand Forks parks for twenty years, presided as president of the North Dakota State Horticultural Society for the year 1938-39. In 1955-56, the North Dakota group was ably directed by Mrs. Clifford Westby of Maddock, and in 1959-60, our esteemed and able president was Mrs. Olaf Monson, also of Maddock.

Our society was organized in 1923 and, except for a few war years, has met an-nually since. Our membership has varied from 250 to 450.

Fargo, N.D. Harry A. Graves, Sec'y North Dakota State Horticultural Society In some instances fruit and vegetable grower groups, along with garden clubs and other organizations, are affiliates of and other organizations, are affiliates of their state horticultural society (as in the case of the Iowa State Fruit Growers Assn.) We had in mind specifically the fruit and vegetable grower groups when we doffed our hat to commercial vegetable grower Ruth Wedgworth. Our chapeaux are off to the North Dakota and Iowa la-

dies for their leadership.

Past president Baxter is a grower and shipper of grapes, apples, and pears, has the largest vineyard in lowa.

Mr. Graves is extension horticulturist

North Dakota Agricultural College .-

Twenty Apples A Day?

Dear Editor:

Nobody believes more than I in the healthful quality of apples, but we should keep the record straight. This refers to your article on Page 13 of the December issue. If 15 grams of pectin are required, this would more probably be 20 to 30 apples per day. It would seem to me that actual study with apples as reported in the Russian study would be more logical than feeding extracted pectin. It may well be that pectin in conjunction with cellulose or cell wall material as found in the apple would give better results. The finding is never-theless an interesting one and should be looked into further.

Dr. R. M. Smock, Professor of Pomology Cornell University

GOOD YEAR "EXTRA HAND" SERVICE AT WORK:

"A quick phone call saved me half a day"

says Murray Verity of Emerald Farms, Delaware, Ohio



THINGS LOOKED BAD when "Bud" Verity's tractor tire punctured one morning in the midst of corn picking. That could have cost him half a day run-ning into town for repairs. Instead, he phoned for Goodyear "Extra Hand" service.



2 8 MILES AWAY in Delaware, Ohio, Goodyear Dealer Vann B. Smith took Variable College Vann B. Smith took Verity's call. His truck was already loaded up and ready to roll. A few quick questions to help in diagnosing the trouble and he was on his way.



- JUST 20 MINUTES LATER and Smith was already on the job at Emerald Farms, pumping out the solution before repairing the tire. On the truck is the free "loaner" supplied whenever a tire needs
- ONLY ONE HOUR AND A HALF after the accident happened. Verity's tire has been expertly repaired and he's headed back to work in his corn field. "I'd have lost at least 4½ to 5 hours if I'd had to demount my own tire—run it into town—wait around for a repair—bring it back and remount it," he says.

AND REMEMBER - "Extra Hand" service isn't all you get from your Goodyear dealer. Whenever a new tractor tire's called for, he equips you with unmatched Sure-Grip quality: the toughest of rubber compounds teamed with exclusive Triple-Tempered cord and groundgripping, ruler-straight treads for outstanding tire performance. Reasons enough to call your Goodyear dealer first! Goodyear, Farm Tire Department, Akron 16, Ohio.

MORE FARMERS PREFER GOODYEAR



- 3 Take care of your bat-tery needs.

TRACTOR TIRES THAN ANY OTHER KIND

- 1 Check, change and repair any type tire.
 2 Furnish "loaners" while your tires are being repaired or retreaded.
 Minimize down time through expert help on
 - through expert help on tire maintenance.

ure-Grip-T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Lots of good things come from

Support National 4-H Week March 4 To 11

Choose either the popular 3-T Sure-Grip or extra quality Traction Sure-Grip tires, both out-in-front performers.

TRITHION° gives you a clean start



Experienced apple growers know that the best, most economical time to start controlling mites, aphids and scales is while they are in the overwintering stage.

TRITHION with spray oil has proved highly effective for control of overwintering eggs of mites, green and rosy aphids. But timing is important. Begin sprays as soon as buds show green, and complete before leaves unfold from the buds.

If you do not use TRITHION-oil by delayed-dormant, TRITHION alone should be used in late delayed-dormant spray.

For your convenience, TRITHION is available in two formulations: TRITHION 25-W and TRITHION 4 Flowable (an aqueous emulsion containing 4 pounds per gallon). Start your spray program early . . . to give your apples a clean start. See your dealer.

Stauffer Chemical Company, 380 Madison Ave., N. Y. 17, N. Y.

Stauffer's Rog. T. M. fer an insecticide-acaricide.



Fruit Grower

· Fruit for Health ·

OUR FRUIT PIONEERS

PART 1-Apple and pear breeding in the United States

By J. R. MAGNESS

BEFORE discussing recent work on apple and pear breeding in this country it is well to pay tribute to the untold generations in Asia and Europe who selected improved kinds of these fruits through the centuries before America was discovered. From their native origins, believed to be the foothills of the Caucasus Mountains and eastward in Asia, both of these fruits were carried throughout Europe thousands of years before the Christian era. This fact is established by the finding of remnants of apple and pear fruits among the debris of the cave dwellers of central Europe.

Finding and propagating trees producing better than average kinds of fruits occurred as mankind began to settle in certain areas and produce food crops. Pliny of Rome in the first century A.D. knew 36 kinds of apples and 40 of pears.

By the time America was discovered, apples and pears of good quality were being grown throughout most of Europe. In Russia selection was largely for hardiness to find kinds of fair quality that would endure the rigorous climate. In the milder parts of Europe fruits of larger size and better quality were sought. Although the art of grafting was known, most plantings were seedling trees.

The earliest European settlers brought with them seeds and some grafted trees of apples and pears. Orchards of grafted trees were in existence in America before 1700. Some of the Indians planted seedling orchards.

As settlers moved westward they took apples and pears with them.

In subsequent articles in this series Dr. Magness will pay tribute to the breeders of stone fruits, citrus fruits, and berries.

Dr. Magness, who is internationally known as a horticultural authority, retired as chief of Fruit and Nut Crops Research Branch, USDA, in 1959. He is currently editor of the Proceedings of American Society for Horticultural Science.

Photos show Bartlett pear and Baldwin, one of our earliest apple varieties.

John Chapman—"Johnny Appleseed"
—roamed Ohio and Indiana preaching to the Indians and planting apple seeds. Thus seedling apple trees became widely dispersed from the Atlantic to the western prairies.

Most of our American apple varieties have originated as chance seedlings from the millions of such trees that have grown in this country. Three varieties still important—Baldwin, Rhode Island Greening, and Yellow Newtown—date to pre-Revolutionary days. Most other varieties now important were found during the 19th century.

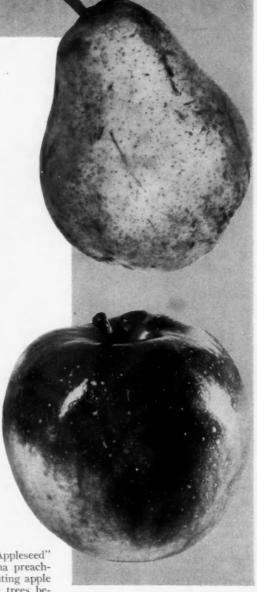
The early history of pear varieties in this country paralleled that of the apple. About the time of the American Revolution, however, the pear blight disease began to destroy the European type pears then being grown. The disease was recorded as

present in the Hudson Valley in 1780.

A century elapsed before the nature of the disease was worked out by Professor Burrill of University of Illinois. This disease largely destroyed the European type pears in all areas of the United States east of the Rocky Mountains.

The Asiatic type pears, such as the Chinese sand pear, though of poor quality, are sufficiently resistant to the disease to survive, and scattered trees of this type became distributed in this country. Some natural hybrids between Oriental and European types began to appear and were sufficiently resistant to blight to persist.

(Continued on page 48)



THE VARIETY PARADE



Jonalicious developed as a chance seedling.

By REID M. BROOKS and H. P. OLMO

Register of New Fruit and Nut Varieties University of California, Davis

UNDREDS of new fruit and nut varieties are being named and introduced each year. The intent, obviously, is to produce improvements over our recognized standards, or in still rarer cases to add something entirely new. But of the many varieties appearing in the Register of New Fruit and Nut Varieties as newly introduced and promising, far too many soon acquire the notation "obsolete."

We doubt that many of the originators would release a variety that they had no hopes for. Quite the contrary. The fruit breeder too often compares his own production on a pedestal like an only child—obviously without fault. This is certainly human, but the difficulty is often the lack of adequate comparison of a suitable preliminary test before the promising selection reaches the stage of commercial challenge.

Few growers have the resources, the time, or the impartiality to make such tests. Most often, decrepit trees or vines are grafted over for the test, and these may be diseased stocks, starting a chain of infection in the new variety.

There are further objections to releasing "promising" selections to growers on a widespread scale, Many may be named or propagated without consent of the originator, and they can be surreptitiously distributed.

There are few new selections, even though they may be uniformly poor, that do not have their die-hard proponents. Thus, many poor varieties get distributed. If the flood of new selections increases, the confidence of the grower is soon undermined, and general confusion results.

This brings about a poor reputation or at least skepticism for all new releases, with the result that the really good variety has even more difficulty in proving its performance. We would say that most peach and nectarine growers are now well aware of the dilemma.

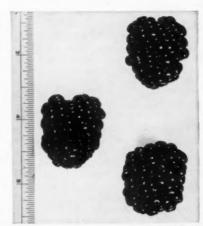
It is time for well-planned and impartial comparative testing of new fruits before they reach the status of a named variety. A variety name should signify something earned and meritorious; until that time a numbered tag for identification purposes is all that is needed.

The preliminary evaluations should be made with standard varieties for comparison before a promising selection is given a variety name. Such trial blocks can be the source of great interest for visitors, and, more im-

 The parade includes recent introductions of tree fruits, berries, grapes, and nuts



Chief Bemidji is a hardy everbearing variety.



portant, allows the breeder to get the less biased opinions of others.

State and federal experiment stations are the logical choice to make comparative tests, especially those located in important areas for the particular species.



King Luscious is large, has highly colored skin.



Burdick macadamia two years from grafting.

Of course we have a selfish motive, as we would like to make the lists in the Register shorter and more meaningful. The sequence of values from promising, to fair, to poor, to obsolete is a monotonous one.

APPLE

Jonalicious comes from Abilene, Tex., where Anna Morris Daniels found it as a chance seedling in 1933. It was patented in 1958 and assigned to Stark Bro's. Nurseries, Louisiana, Mo. Yellow ground color is blushed with bright solid red toward maturity. Juicy flesh is slightly tinged with yellow, is firm, crisp, subacid with a distinct aroma. Stores well until May. Most nearly resembles Jonathan.

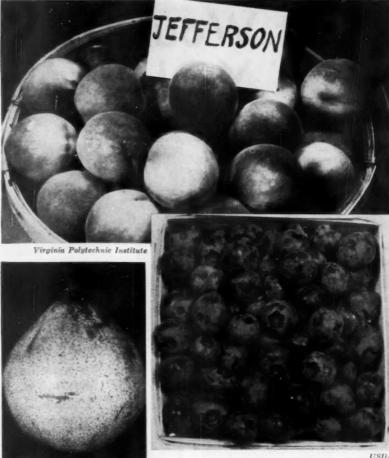
King Luscious was just introduced by Bountiful Ridge Nurseries, Princess Anne, Md. It is the result of combining a chance seedling, Delicious, and King David. This is a large fruit, with a highly colored skin, being deep red at maturity with a beautiful bloom. White flesh has fine flavor. Ripens with Rome Beauty and Stayman. Tree is semi-dwarf and bears annually. Apparently tolerant to apple scab. Blooms about one week after Rome

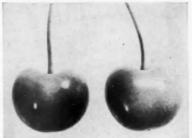
Beauty.

Law Rome Beauty, although introduced in 1958, is included here because it is a patented variety. Walter A. Law, To-nasket, Wash., found this bud mutation on a tree of Rome Beauty in 1952. Fruit is somewhat more conical than Rome Beauty, which it most resembles. Skin is an overall bright red that develops color about 14 days before maturity. A Stark

Bro's Nurseries introduction.

Pacific Pride originated in Mt. Vernon,
Wash., by E. R. Gage. Patent is assigned





Washington State College Light-colored Rainier is sweeter than Bing.

to Sherm Fox, Pacific Pride Gardens, Bow, Wash. A large apple, averaging about 3¾ inches wide. Thick skin is tough, smooth, somewhat oily, and striped red with a yellow ground color. Slightly yellow flesh is juicy, firm but crisp, with a tart flavor. Keeps very well in cold storage. May be used as a market, culi-nary, or dessert fruit. Tree is medium size, very vigorous, and spreading. Winter-hardy, productive; bears regu-

Red Delight originated in Alabama by Oren T. Bolding, Sr., who assigned it to Commercial Nursery Company, Deckard, Tenn. Skin is deep red; flesh firm, juicy, and subacid. Ripens during November 10-20 in Alabama; most nearly resembles Mammoth Black Twig. Blooms late; tends to bear annually.

Jefferson (top) is a yellow-fleshed freestone. Magness pear (left) has high blight resistance. Collins blueberry (above) is for northeast U.S.

Skyline Supreme is another variety just introduced by Bountiful Ridge Nurseries, Princess Anne, Md. Appears to be a "whole tree sport" of Starking, discovered in 1956 by Wm. E. Dalton, Henderson-ville, N.C. Skin is blushed red with no striping. Matures about 10 days ahead of Richared and Starking, Under Appalachian conditions, it tends toward, sheepian conditions, it tends toward sheep-nosed fruits. The vigorous tree comes into bearing early; is a standard type as concerns size.

APRICOT

Redsweet, a bud mutation of Blenheim discovered in 1954 by Haig Culbashian in Fresno, Calif., has a skin which is almost covered with a deep red blush. Ripens last of June in Fresno. This average-sized freestone apricot has good shipping qualities.

BLACKBERRY

Brazos was originated by J. Benton Storey, Texas Agricultural Experiment Station, College Station. A second-gen-eration selection from Lawton x Nessberry. Large size of fruit is maintained longer in harvest than Lawton and Humble. Harvest season is as long as that of ble. Harvest season is as long as that of Lawton. Brazos is primarily a fresh-market fruit. Bushes have erect canes and show greater vigor and less evidence of disease than do Humble and Lawton.

Early June comes from research work of B. O. Fry, Georgia Agricultural Ex(Continued on page 49)

What Would Be YOUR ANSWER?

American Fruit Grower submitted the letter shown here to several experts, and their recommendations to Clair Walters form the basis of this article. Do you agree with the experts?

CLAIR WALTERS' letter raises two interesting questions. Is it possible to get started in fruit growing today without considerable financial backing? With a retail sales outlet, how large must a fruit enterprise be to support a family?

It is difficult to answer his question with a definite yes or no. There are some important "ifs" which only Walters can answer. To sum it up in a nutshell, a \$5000 a year income is

well within reach.

The fruit farm has a good chance of success if Walters, his wife, and family have the necessary ingenuity and perseverance; if the site is well-drained, relatively frost-free, and adapted to fruit to permit year in, year out production of good crops; and if there is a well-situated road-side market outlet.

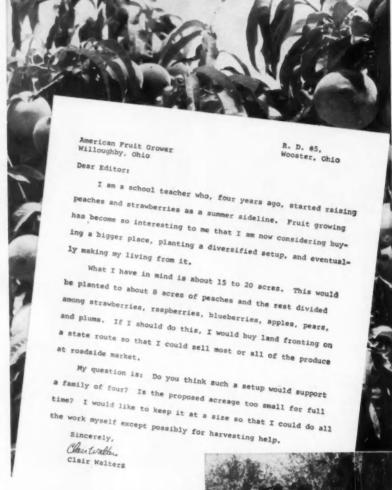
Walters won't make a fortune. But he will be his own boss, he will raise his children in the country, have spare time in the winter, and be outdoors a great deal.

To figure out what the income might be from a 15- to 20-acre fruit planting with retail sales and the investment needed, we sharpened our pencils and put some figures down on paper for consideration.

Here's an acreage plan we worked out with Glenn Haskins, county

Acr	reage	Yield	Selling Price	1	iotal
8	peaches	2500 bu.	\$3.00 pk.	\$	7,500
1	strawberries	5000 qt.	.40 qt.	-	2,000
1	raspberries	1000 qt.	.60 qt.		600
1	blueberries	3000 qt.	.70 qt.		2,100
4	apples	1200 bu.	1.00 pk.		4,800
1	pears	300 bu.	1.00 pk.		1,200
16	acres			5	18,200

agent in Lake County, Ohio, home county of AMERICAN FRUIT GROWER. Bear in mind that the yields are from trees and plants at top production and the potential returns are for high-quality produce sold at retail.



A gross of \$18,000 should yield a \$10,000 net after deducting out-ofpocket costs of production including labor, sprays, fertilizers, baskets, etc.

In starting out on this venture, there is an initial capital investment in land, trees, plants, and equipment, as well as the roadside market and refrigeration facilities.

The necessary capital investment might break down as follows:

20 Acres @ \$400 per acre\$ Equipment, including roadside mar-	8,000
ket and refrigeration machinery (used equipment)	8,000
Trees and plants	1,000

(Continued on page 34)



Clair Walters and family, ready for the harvest.

AMERICAN FRUIT GROWER

FIGURE THE REAL COST OF YOUR INSECTICIDES

It's easy to pay too much — or too little! Read how malathion gives you top performance at reasonable cost per 100 gallons.

Somewhere between risky pennypinching and needless expense is the insecticide program that does the job at reasonable cost. You can't use cheap but ineffective insecticides. But you don't have to use high-cost insecticides, either. Here's why.

Malathion keeps costs low

The real measure of cost is cost per 100 gallons. This tells you how much you're actually paying to do the job, not simply how much per pound or pint the insecticide costs. This chart shows how malathion compares with a typical high-cost insecticide. Compare for yourself. Substitute figures from your area, for both malathion and other insecticides.

And malathion gives wide-range control

Malathion fills the other requirement of a truly economical insecticide: consistently good insect control. It stops most important insects including aphids, psylla, most peach insects, and resistant insects, such as DDT-resistant codling moth and DDD-resistant red-banded leaf roller.

Residual control. Add a chlorinated insecticide to malathion to get residual control in your cover program. You'll find this program will control just about any insect complex likely to occur from first cover to harvest. American Cyanamid Company, Agricultural Division, New York 20, N. Y.

	Malathion	Typical, high-cost insecticide
1. Cost per lb., W.P.	\$0.56	\$1.90
2. Rate per 100 gallons	21/2 lbs. W.P.	1 lb. W.P.
3. Cost per 100 gallons	\$1.40	\$1.90

Make this comparison yourself. Although you use more malathion per 100 gallons (line 2), the cost per lb. of W. P. for malathion (line 1) is far below that of today's high-cost materials. Result: malathion's cost per 100 gallons is lower (line 3).





You don't need a respirator when you use malathion.

The label instructions on Cyanamid products, and on products containing Cyanamid ingredients, are the result of years of research and have been accepted by Federal and/or State Governments. Always read the labels and carefully follow their directions for use.

MALATHION INSECTICIDES

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

Can VERTICAL INTEGRATION Work for You?

Vertical integration can be a disintegrating force if it is not harnessed to the needs of both agriculture and business. Growers must accept integration as an opportunity to build the kind of organizations that will benefit themselves and their industry

By JOSEPH G. KNAPP

Administrator, Farm Co-operative Service
U.S. Department of Agriculture

NO word better describes the marketing of farm products than "change." In the fast-moving decade just ending we have watched the replacement of old methods, old marketing channels, and old types of organizations. And in the 1960's we can expect still more changes to come.

The term vertical integration is often used to describe many of the changes taking place in agricultural marketing. By this term we mean the linking together of several of the functions or jobs involved in the processes of producing and marketing farm products.

In the past, several different business firms or co-operatives separately performed the assembling, grading, packing, transporting, and retailing functions involved in marketing a certain product. Now a retail chain organization or a co-operative marketing association may perform some or all of these functions. In other words, the chain or the co-operative has linked together, or integrated, several of the jobs involved in getting the product from the farm to the consumer.

When the direction of the integration is from the retailer toward the farm, as in the case of a chain store system, we may describe it by the expressive phrase, "descending integration." On the other hand, integration from the farm toward the consumer through a co-operative can be aptly called "ascending integration."

Integration can be achieved through ownership or by contract.

Integration through ownership means that the integrator controls through ownership the various jobs involved in production and marketing. For example, a retail chain may integrate by establishing or purchasing a business that grades and prepackages produce bought in bulk from local shippers.

Integration through contract comes when the integrator does not actually own the facilities to perform various functions but controls them through contracts. Here is where the familiar term "contract farming" comes in. A farmer, for example, may produce certain vegetables or broilers under contract for a processor or retail organization.

Perhaps the oldest and most common form of vertical integration is

As a grower two major alternatives face you:

1) You may become a passive partner in the mass distribution system, a hired hand having little if any decision-making power, and essentially selling only your own labor; or 2) You may join with other growers to develop organizations that provide a countervailing power which will help you retain control over major decisions in marketing. Which shall it be?

the contract between the canner and the grower. Essentially the contract provides a legal device for achieving a rather close adjustment between the production of the raw product and the quantity needed by the processor.

The fact that nearly 90% of the vegetables for processing are grown under contract suggests that this form of integration provides advantages to both processors and growers. However, this form of integration may also have disadvantages for growers.

Contract terms are often complex and the grower may be at a disadvantage in understanding them. The price of the raw product may be determined only once a year and this may make it difficult or impossible to adequately assess and give effect to changes in the factors affecting price.

In addition, the industry may be characterized by relatively few—often large—processors and by relatively many—often small—growers. While both processors and growers have been increasing the size of their operations, the declining number of proc-

essors has made growers more dependent on fewer outlets. To strengthen their economic power in this type of market situation, increasing numbers of growers have turned to the bargaining type of co-operative.

A bargaining co-operative's basic purpose is to negotiate price and other contract terms for a group of growers. By joining together, growers can obtain needed marketing and economic information, employ the services of marketing specialists, and develop the needed economic strength to bargain successfully with the processing companies with whom they deal.

Since bargaining associations are designed to develop economic power for farmers, they must accept economic responsibilities. If bargaining associations of growers attempt to use their economic power to achieve short-run price advantages at the expense of the long-run health of the industry, they do their grower-members, and the industry, a disservice. Such a policy, if successful, would encourage additional production by members as well as by other growers, and it would curtail rather than encourage consumption.

Thus, bargaining associations must attempt to negotiate prices on the basis of economic facts, or they sow the seeds of their own eventual fail-

ure.

Two other trends in vertical integration in the processed fruit and vegetable industry should be recognized: 1) processors going into farming; and 2) farmers going into processing.

In certain areas and for some commodities processors have gone into production. That is, processors have integrated all the way back to the farm. This assures the processor of even closer co-ordination between production and the needs of the market. While he faces greater risks, the processor may feel that this closer co-

(Continued on page 46)





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How Insta-Hitch works: Hook on tractormounted unit engages matching unit on implement. When hydraulic arms are raised, the two parts close. Pushing lever locks couplings.



Post hole digger was hooked up in seconds from driver's seat with Insta-Hitch. Any threepoint or tongued implement can be switched readily without backbreaking work and delays.

NEW TRACTOR HITCH... a Time and Temper Saver

By R. T. MEISTER

NE of the most simple yet efficient devices we use in American Fruit Grower's experimental orchard is the Insta-Hitch. This piece of equipment is a natural extension of the three-point hitch. It makes it possible to hook up implements without getting off the tractor seat.

Inventor Cliff Stuart designed the Insta-Hitch in the form of a triangle so that it works just as effectively on uneven ground as on level ground. It consists of two parts, one of which mounts on the tractor, the other on the implement.

In operation, the tractor is backed to the implement and the hitch lowered so that the hook catches the matching unit on the implement. The hydraulic arms are raised and the two parts of the hitch close into position. Raising the lever locks the couplings together.

Contrast this simple method with the usual push and pull struggle to get the implement properly lined up to the tractor, pushing hydraulic arms to get them properly fastened to the implement, then fussing and fuming while trying to align the top point.

The Insta-Hitch is also adapted to a front-mounted loader to which buckets, blades, or pallet-fork lifts can be quickly attached or detached. A front-mounted loader with Insta-Hitch makes child's play out of loading or unloading implements on a truck for transport.

The grower who changes implements frequently will find the Insta-Hitch a time and temper saver, as will the grower who moves implements frequently from one orchard to another. For more information on Insta-Hitch write Guy Lane, Powell Pressed Steel Products, Hubbard, Ohio. In Canada it is manufactured by McKee Brothers, Elmira, Ontario.



Insta-Hitch on front-mounted hydraulic loader makes an easy job of unloading rotary cutter.

Driver did not get off tractor to do hitching, won't need to get off to uncouple cutter.



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Insta-Hitch eliminates the hazards of "man-handling" heavy equipment into place. No longer is it necessary to run the risk of serious injuries to you, your son or your employee. The dangers and time lost because of mashed feet, wrenched muscles, hernias and skinned knuckles are gone forever with the Insta-Hitch System.

Insta-Hitch is available for loader attachments. Buckets, forks, blades, fork lifts and other attachments are instantly changed with the Insta-Hitch System. Transporting and loading of rear equipment is also handled with your present loader. Saves time and labor with complete safety.

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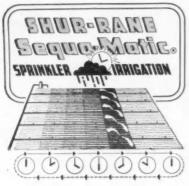




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PEACHES

Pruning for Profit

THE Sandhill peach acreage of North Carolina, comprising approximately 10,000 acres, is spread over seven counties: Montgomery, Moore, Richmond, Anson, Scotland, Lee, and Hoke. Peach production in the Sandhills dates back to 1890.

One of the leading peach growers in the area is Pat Harmon, of Candor. He first started working with peaches on his father's farm which had 70 acres of three-year-old trees on it when it was purchased. In 1946, after a stint in the Armed Services, Harmon bought his own land and began to grow peaches. Today he has 170 acres with 140 in production.

Harmon's five main varieties, listed in order of ripening, are Cardinal, Dixired, Coronet, Southland, and Keystone. Five others which are only minor in number are Mayflower, Dixigem, Redhaven, Golden Jubilee, and Elberta.

Planted late in 1960 or early in 1961 were 2000 Marcus and 2000 Loring. The Marcus variety was released by North Carolina Agricultural Research Station in 1959. It is a yellow-fleshed cling that ripens about one week earlier than Mayflower.

Because of the abundance of root-knot nematodes in the Sandhill area, Harmon fumigates the soil prior to planting. Thirty-five gallons of DDT are usually applied as a solid treatment in late fall before soil temperature reaches 50 to 55° F. The cost of material and application runs about \$50 per acre.

About three weeks after fumigation, the land is marked off and holes are dug with a shovel. A June-budded tree is placed in the hole and positioned a little deeper than the depth at which it grew at the nursery.

Generally trees are set 20x18 feet but 4000 new trees have been set 20x14 feet as an experiment in a hedgerow planting.

Pruning begins early in the life of Harmon's trees. He knows that the higher a tree grows, the more it costs him yearly to prune, spray, thin, and harvest. The first pruning is one job that often is the most important and this is done by the most experienced worker—Harmon himself.

For this job he uses a new or a well-sharpened lopper—one with a steel cutter, aluminum handle, and rubber or plastic grippers. He cuts



This two-year-old peach tree has been pruned lightly with little thinning or heading back.



Harmon demonstrates heavy pruning to show method used in his area until a few years ago.



These peach trees have been medium pruned. Harmon prefers this moderate pruning method.

the tree back to approximately 18 inches and all side branches to one

Trees are often planted in this area in November, December, and January. Thus, Harmon does not do this pruning until the buds are about ready to swell.

The second pruning comes in June of the first season. At this time Harmon rubs or pushes off the leaves and shoots that do not meet his requirements for laterals. The third pruning is late in the dormant season after one full year of growth. Then the tree is shaped and the three or four laterals that are to be the main scaffolds are finally selected.

Pruning of mature trees in the Sandhill area is usually done with 18 to 24-inch loppers. Some of the growers provide hand pruners and a saw, but Harmon has found that the workers lose the hand pruners and saws. He supplies only the loppers.

Harmon thinks five men are about the right number for his pruning crew. Each one is given a row and is paid for piece work. The rate varies with the age of tree and the job to be done. The average price is about 10 cents per tree. This would be about \$10 per acre.

Production of five-year-old trees on Harmon's farm in 1960 ran about three half-bushel baskets of packed fruit 2 inches and up for the early varieties. Harmon noted that onehalf bushel of fruit per tree on the early varieties didn't size up to the 2-inch minimum in 1960.

His other varieties averaged six half-bushel baskets of packed fruit 2 inches and up. This is considered a good yield for trees in the sandy soil of the Sandhill area.

Fertilization on the light sand may vary from that of other areas. Harmon has found that on the early varieties 12 pounds of 5-10-10 and 2 pounds of nitrate of soda applied and disked in February suits him.

For the midseason varieties he uses 6 pounds of 5-10-10 and 2 pounds of nitrate of soda in February. Then, if he has a good set of fruit, he adds 6 more pounds of 5-10-10 fertilizer in March.

On both early and midseason varieties he watches his trees. If they look pale after harvest, one pound of nitrate of soda is applied to each tree.

The proof of the pudding is in the eating and Harmon has the proof. His 1960 crop was excellent when picked and eaten at the tree or the roadside stand or when packed, hydrocooled, and shipped and offered for sale at a distant northern market. -Melvin H. Kolbe, Extension Horticultural Specialist, North Carolina State College, Raleigh.

SEQUA-MATIC IRRIGATION?

Check these reports from user



Ed A. Bartosz Turner, Oregon

POLE BEANS

"Our first experience with the Shur-Rane Sequa-Matic Sprinkler Irrigation System has been excellent. On a nine-acre bean yard this season, we saved all of the cost on labor which would ordinarily have been used to move pipe. We can also point to better moisture control and distribution of water. We liked Sequa-Matic so well we are ordering more for an adjacent yard this spring."



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"With the Sequa-Matic System I reduced my irrigation labor costs from \$200.00 to approximately \$5.00 per acre. This even includes the cost of laying out and picking up the system."



Kochergen Brothers' Farm John A. Kochergen Huron, California

POTATOES

"We have sufficient confidence in the labor-saving and yieldincreasing qualities of the Shur-Rane Sequa-Matic Sprinkler Irrigation System to install it on 160 acres of potatoes. We have accurate cost and production data on previous crops. These give us an opportunity to make what we believe will be some very favorable comparisons,"

Lester Neufeld Downey, California



"We had a Sequa-Matic System installed in a 30-acre grove during the summer of 1960. The results have been gratifying enough that we are planning to expand the installation to 70 acres this spring. We are par-ticularly pleased with the savings in time and labor."



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WANTS HEDGER BLUEPRINTS

On page 13 of the December issue you pictured a fruit tree hedger. Is this machine being produced commercially or are blueprints available?—Illinois.

No. The hedger is an experimental machine built at Michigan State, where it is presently being tested. Research work on the hedger is not expected to be complete for three to five years. Michigan experts are not recommending its use until then.

GRADER CAUGHT HIS EYE

In your November article, "Should I Buy A New Piece of Equipment?," you pictured a grader. Can you tell me who makes it? We are interested in a machine of this type.—Colorado.

Wayland Machinery Co., Covesville, Virginia.

CHERRY PROCESSING BOOK

Where can I get a really comprehensive book on processing sweet and sour cherries? We now have over 200 Lamberts and plan on planting more sweet cherries in the spring.—Washington.

"Cherries and Cherry Products" by Roy E. Marshall is a good one. Our Book Department sells it for \$9.50.

WHERE CAN I GET

Puget Beauty strawberry?—Washington.

Sources in your state are: Centralia Fruit Farms, Route 1, Box 345, Centralia; C. George Frahm, Route 1, Box 76, Mt. Vernon; Matlock Fruit Farms, Route 5, Box 530, Puyallup; Sakuma Bros., Route 2, Mt. Vernon; Kenneth J. Scholz, Box 37, McMillan; Mervin Ward, Route 5, Box 378, Puyallup.

Sacagawea and Hiawatha plums?—Oklahoma.

Schubert Nurseries, Airport Rd., Bismarck, N. D.

Wellspur Delicious apple?—California.

May Nursery Co., Yakima, Wash.; Van Well Nursery, Wenatchee, Wash.; Heath's Nursery, Box 85, Pateros, Wash.

HOW TO REMOVE TREE STUMPS

I have to clear some old apple trees out of my orchard. What's the best way to get rid of the stumps after the trees are cut down?— Michigan.

Most growers bulldoze the tree and all in one operation. However, your situation may call for something different.

Getting rid of the stumps will be easier if you kill the trees before they're cut down. Chop a ring of gashes around the trunk near the ground line. Be sure to cut through the inner bark and slightly into the sapwood. Pour a solution of one pint 2,4,5-T ester in 3 gallons of fuel oil or a mixture of 4 pounds ammonium sulfamate (Ammate) crystals in a gallon of water into the gashes. Be sure the cuts are made so they'll retain some of the solution.

If you have to cut down living trees and remove the stumps later, either solution will still work. Spray or brush the mixture on the top and sides of the stumps.

READY FOR A SPRAYER? SELECT A HARDIE



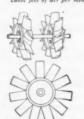
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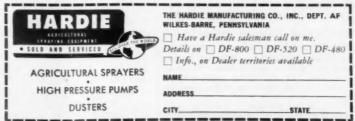
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Sprinkler applies even distribution of least amount of water possible to cherry trees. Ice load is uniform and approximates weight of a good cherry crop. Breakage from ice is negligible.

CHERRIES

Raising Orchard Temperature

N a 3½-acre sour cherry orchard owned by Harold Fox, near Benton Harbor, Mich., crops were frequently lost from low temperatures due to the orchard being located in the path of rapid and concentrated cold air movement from upland to creek basin. From 1950 to 1957 Fox lost almost all of his crop each year.

In 1958, before tearing out the unprofitable orchard, he decided to experiment with his sprinkler irrigation system to try to raise the orchard temperature. Since that time, even when temperatures dropped as low as 24 degrees in the pre-blossom period in 1959, Fox has had good cherry

During these three years there have been no serious cold periods in the area; however, low temperature damage was considerably reduced with a minimum of wood breakage.

One of the first rules to observe in following this method is to have the irrigation system set up and operating 30 or more days before the blossom period. Many cherry crops are damaged or lost during the weeks ahead of blossom when fruits are in the tender bud stage.

Even distribution of the least amount of water possible is the prime requisite to prevent breakage of limbs by heavy ice formation. In three years limb breakage due to ice has been inconsequential. The secret is to keep the nozzle opening size small and still maintain radius and uniformity of water coverage.



Same cherry trees later in day. Harold Fox, holding plastic pipe, examines blossoms.

Overhead sprinklers were found to be more successful than undertree because the water requirements are much less in relation to effectiveness. Thermometer readings in the undertree plot were about the same as the readings in the overhead areas but almost double the amount of water was required.

The ideal sprinkler spacing proved to be 70x90 feet triangular with 11/64-inch orifice sizes. One side of the sprinkler was used, the other side plugged. Pressure was not less than 50 psi on each sprinkler. Water was applied at the rate of about 42 gallons per minute per acre. Riser height was determined by the

An important thing to remember is that tree limbs will bend when ice forms on them. This must be taken into consideration when placing the sprinklers and determining riser

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The method does not harm or interfere with the growth of the tree. It has been proved in use...10,000 trees in one orchard alone have been strapped. Cost of materials runs only about 13 cents per tree. Application is simple, and may be made early in the growing season or after the harvest.

As any grower will recognize, elimination of main limb breakage is an important basic benefit that prolongs tree life, virtually eliminates orchard clearing costs, and stops sunburn losses that often result from main limb breakage. In addition, the strengthening of trees with this new method speeds harvesting with automatic shaking machines and minimizes tree damage from the use of such machines.

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You can get started at once using this new Signode way to stop main limb breakage in your orchard. Full details will be sent promptly, without charge-Branch offices in 71 cities—see "Strapping" in the Yellow Pages, or write



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LANPHEAR SUPPLY DIVISION FOREST CITY TREE PROTECTION CO. 1884 S. Green Road Tel. Evergreen 1-170(Cleveland 21, Ohio height so that limbs will not interfere with sprinkler operation. Some laterals were set under the trees while others were placed between rows to maintain the 70x90-foot spacing.

Two or more accurate thermometers are needed, one for the inside of the orchard and the other for a location not less than 50 feet or more than 100 feet from the outside of the orchard. The thermometers should not be located near a paved highway or building since heat given off by these objects may give false ther-

mometer readings.

When the inner thermometer approaches 32°, the irrigation system should be turned on. After the system has been in operation for a few minutes, the outside thermometer should be consulted. If it has climbed well above the danger point and no ice has formed, the system may be shut off. However, if ice has formed, the sprinklers should be kept running regardless of the readings and should not be turned off until all ice is washed off.

One error to be avoided is shutting off the system when the inner thermometer reading exceeds 32°, and another is moving the pipe to another location when the trees have iced up.

Cost of the sprinkler irrigation equipment is about \$400 per acre not including pumps and mainline. However, this cost can be lowered by us-

ing plastic pipe.

Harold Fox's experiment has proven that an irrigation system provides a good weapon for fighting low temperatures. He expects to continue using this system which perhaps will provide even more positive results in the future.—R. E. Palmer, Sodus Fruit Exchange, Sodus, Mich.

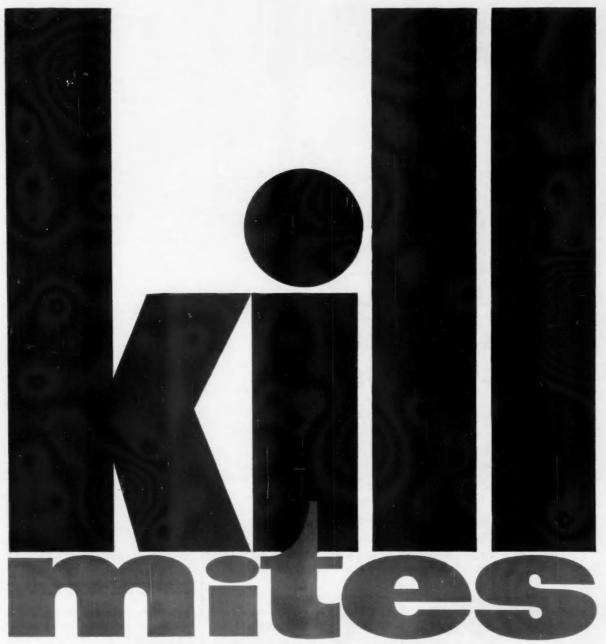
BERRIES

Whirlybird Dryers

CHUCK BOND, Puyallup, Wash., blueberry grower, successfully used a new method the past harvest season for drying his bushes after sudden rains—the helicopter.

The method is equally practical for strawberries and other small fruits, he told growers at the recent Western Washington Horticultural Association meeting. He estimated costs at \$1 per minute.

Working drawings for an attractive easy-tobuild roadside stand are available for \$2.00 from AMERICAN FRUIT GROWER, Willoughby, Ohio.



IN MINUTES · FOR WEEKS

This season you can control mites, pear psylla and codling moth with ethion, the new, fast-acting, highly effective miticide-insecticide. Ethion combines fast initial kill with long residual action to provide effective control of all these important orchard pests: codling moth, European Red mite and two-spotted mite on apples; the same complex plus pear psylla on pears; red mite and two-spotted mite on peaches, plums and

prunes; grape leafhopper, two-spotted mite and Willamette mite on grapes; and for lecanium scale on plums and prunes. Harmless to foliage, ethion can be used with safety on all varieties except Wealthy and Melba apples. Ethion is tailored to your orchard program—an excellent summer miticide, it provides

extra protection against codling moth
—for fast action and long protection,
see your dealer now for ethion.

TECHNICAL CHEMICALS DEPT., NIAGARA CHEMICAL DIVISION, FOOD MACHINERY AND CHEMICAL CORPORATION, MIDDLEPORT, N. Y.

Myers improved air performance

gives greater protection reduces spraying cost

High Pressure Centrifugal Pump and Myers drive-mist nozzles produce ideal spray droplet size.

Twin Centrifugal Fans put high volume of air directly into tree foliage.

Tapered Air Outlets direct proper air-spray mixture into foliage for maximum penetration and coverage.



Touch-Matic Control gives operator quick stop-start action, keeps waste at a minimum, greatly reduces spraying costs.



nearest you for a demonstration of a Myers air or gun sprayer in your own grove or orchard, or write to:



The F. E. Myers & Bro. Co.
ASHLAND, OHIO KITCHENER, ONTARIO

APPLES

Idared

"WE feel sure, in our climate at least, Idared will become one of the most important varieties of the future." So writes George Whaley, Ruthven, Ontario, whose orchard is on the Canadian shore of Lake Erie. He goes on to say, "It is making a very sturdy, very productive tree. Apples are of excellent size, excellent color, and hang to the tree exceptionally well."

This is the latest of scores of similar enthusiastic reports regarding this new apple. In Michigan, New York, and New Hampshire it is considered sufficiently promising for trial commercial production. It has been reported upon favorably also from Nova Scotia, Virginia, North Carolina, Iowa, western Washington, Oregon, and many other places,



Ernest O'Leary, Fruitland, Idaho, is proud of this branch load of large-sized, bright red Idareds ready to be picked for roadside sale.

including Europe. In Michigan it is considered a promising substitute for Northern Spy, in New Hampshire as a late variety to follow Mc-Intosh

Idared is the product of a long-time apple breeding program begun at the Idaho Agricultural Experiment Station in 1910. It was selected by the writer in the spring of 1935 as outstanding among 4000 seedlings then in storage. After propagation and further testing under both irrigated and dry-land conditions, it was finally named and introduced in 1942.

A cross between Wagener and Jonathan, Idared is superior to both parents. It is larger than either. Ripening 10 days after Jonathan it has an almost solid, bright red color

AMERICAN FRUIT GROWER



GLYODIN pays more ways in cover sprays!

FUNGICIDE

You get top quality at low cost when you use Glyodin fungicide in your entire cover spray program. For a cost as low as 55 cents per 100 gallons of spray, Glyodin gives reliable protection from scab and summer diseases. In addition, Glyodin spreads and sticks the whole spray mix over foliage and fruit to give you additional benefits.

When you use Glyodin in cover sprays, you get effective control of

scab, sooty blotch, Brooks spot, bitter rot, black rot and fly speck. Glyodin is excellent with ferbam or thylate for control of rust, x-spot and with zineb for other summer diseases. In such combinations, Glyodin costs you only 37 cents per 100 gallons of cover spray.

Glyodin is an ideal spreader-sticker. It gives smooth, clear, transparent protection without reducing leaf efficiency and without fruit discoloration. Used regularly, Glyodin suppresses mites so well it often saves the cost of special mite sprays.

Yes, easy-mixing liquid Glyodin fungicide stays and pays in cover sprays. No other fungicide offers you its combination of economy plus dependable protection that produces more fine fruit. Order enough Crag Glyodin now for your entire cover spray program!

SEE YOUR GLYODIN SUPPLIER NOW UNION CARBIDE CHEMICALS COMPANY

Division of Union Carbide Corporation . 270 Park Avenue . New York 17, N. Y.

UNION CARBIDE

"Crag" and "Union Carbide" are registered trade marks of Union Carbide Corporation.

CONFUSED ABOUT SPRAYER CLAIMS?



Many growers are confused with all the air sprayer claims that have been published recently. High-powered claims like . . . "highest c.f.m.", "best air handling control", "top performance". But, the fact is, highest air volume and gale-like air velocities do not give you adequate tree protection. Any column of air, to be controlled, must have a velocity that is in proper ratio to air volume. Consider this—John Bean engineers have pioneered and developed air handling since the late 30s. The result of this know how through experience is Speed Sprayer's true aerodynamic air control which gives you controlled, individually tailored, spray patterns for positive protection. Don't take our word for it. See your John Bean Dealer to arrange for a free, "seeing-is-believing" demonstration in your own orchard or grove.

WRITE FOR FREE SPEED SPRAYER CATALOG and FREE BOOKLET, "What You Should Know about Air Carrier Spraying".



VISION OF

FOOD MACHINERY AND CHEMICAL CORPORATION

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and good finish. The flesh is white, fine textured, crisp, and juicy. The flavor is excellent, somewhat tart in the early storage period, becoming less tart and attaining its best quality after Christmas.

Gem Canning Company, Emmett, Idaho, has experimented with Idared as a canning variety. Writes Gem's President Ira Jones: "I do not hesitate to express my personal enthusiasm for this apple as a canning apple. It has outstanding flavor, it does not mush up when processed, it has good size and peelable qualities at lower labor cost which in processing is the largest variable factor in cost."

Ironically, in its own back yard Idared has failed so far to find more than limited acceptance. This, however, seems due entirely to the system of marketing used in the Pacific Northwest. Where almost the entire crop of any fruit is sold in distant markets through brokers, a new variety is nearly impossible to introduce. Brokers shy away from a new name.

However, enough of these apples have been grown in the Northwest to know that they will do well here. Yields, quality, and storage are excellent. In Idaho, Arthur Posten, Lewiston, and Mike O'Leary, Fruitland, have grown Idared for many years for roadside market and both find it their best variety.—Leif Verner, University of Idaho, Moscow.

Here's a partial list of nurseries now growing Idared apple trees: Bountiful Ridge Nurseries, Princess Anne, Md.; Columbia & Okanogan Nursery, Wenatchee, Wash.; Greening Nursery Co., Monroe, Mich.; New York State Fruit Testing Co-operative Assn., Geneva, N.Y.; Shenandoah Nursery Co., Shenandoah, Iowa.



ELIMINATE MOUSE TROUBLE

in the dwarf apple orchard of E. F. Haber & Son, Vermilion, Ohio, limestone gravel is placed around base of staked trees. This practice protects trees against damage by mice attracted to the area by the straw mulch. ORTHOCIDE PAY-OFF.
PRINTING APPLES



Grand Champion Award for Jonathans and 22 ribbons out of 22 classes at the 1960 Pennsylvania State Farm Show . . . Grand Champion Award for Golden Delicious and 28 ribbons out of 28 classes at the same show in 1959 . . . plus 69 ribbons out of 69 exhibits at the 1960 Lehigh County Fair! Rewellien Mohr, of Mohr Orchards, Fogelsville, Pennsylvania, has been winning prizes ever since he started with an ORTHO Spray Program in 1954. He says, **"These awards wouldn't have been possible without a complete ORTHOCIDE program.** It's increased the number of Fancy grade from 20% in some varieties to 50% in others."



"Sweepstakes" Award and 50 ribbons out of 50 classes at the Ohio State Fair... first place in the commercial fruit display, and 95% of "firsts" in individual plate varieties at the Cuyahoga County Fair. Bill Eyssen, of Mapleside Fruit Farm, Brunswick, Ohio, has been capturing prizes ever since he started with an ORTHO Spray Program eight years ago. He says, "Our apples have been winning blue ribbons ever since we started using ORTHOCIDE. The fine finish we get with ORTHOCIDE has doubled our production of Fancy grade fruit. It's put us in the Fancy gift-pack business—all our varieties are bringing top prices."



Trophy and rosette for "best of show" at the 1960 New Jersey State Apple Show, plus plaques and ribbon for first place in Red Delicious and Red Stayman classes, and awards and ribbons for first, second and third places in the miscellaneous varieties class. Ernest Race, of Ernella Orchards, Belvidere, New Jersey, who has 150 acres in apples, says, "In my opinion, ORTHOCIDE is the greatest fungicide ever produced. It's put an end to the scab problem, produces healthier foliage, increases bud capacity and yield. From the standpoint of finish — ORTHOCIDE-sprayed apples will all make Fancy grade."



A plaque for the highest rating (99.88%) of all State of Illinois Clean Apple Club entries in 1957, and a Certificate of Membership in the Clean Apple Club each year since he first entered. Ray Grammer, of Carbondale, Illinois, a fruit grower for fourteen years, has had a good bud crop every year since starting on an ORTHO Spray Program eight years ago. He says, "ORTHOCIDE has doubled our yield, and 75% of the crop is earning \$2 more per box due to finer finish. The ORTHOCIDE-treated apples take on a luster we never could get before, and they polish out better."

ORTHOCIDE-users in many areas are winning prizes — for these reasons:

ORTHOCIDE 50 Wettable in an ORTHO Spray Program improves the growth of fruit trees, resulting in thicker, healthier foliage and increased bud capacity. It effectively controls fungus diseases, such as scab and storage rots, and considerably reduces russeting. You get increased yields of higher grade fruit, with the fine finish and better keeping qualities that fetch top market prices. ORTHOCIDE (captan) can produce a consistently higher net return than is possible with any other fungicide. Call your ORTHO Fieldman now, and find out how an ORTHO Spray Program can help you grow prize-winning fruit.



HELPING THE WORLD G OW BETTER



By HENRY BAILEY STEVENS

Welfare for "WHEN President Kennedy ordered the issuance of double rations of surplus foods to Americans in want," writes Myron G. Files, of East Hampstead, N. H., "I at once put double rations of bacon fat and seeds on the bird-feeder platform. Results suggest that the Republicans may be right in their warnings about the evils of welfare state generosity; for now the sparrows gorge themselves.

"Then, instead of quick take-offs and energetic exercises in trees picking at insect eggs, they squat on the rail of the feeder in the sun and look dumpy and dejected as if all vitality has been drained and they need Geritol or Alka Seltzer. They don't even fight any more over the use of the feeder, just sit listlessly and watch the girl birds go by. I may have robbed their souls of the benefits of hardscrabble.

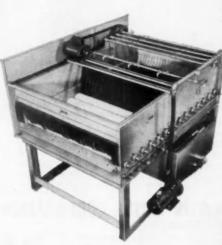
"On the other hand, I marvel at the extraordinary energy of the tiny, 1-ounce chickadee and how he can keep up the charge within through blizzards and chill nights, and his trust and friendliness when I go to the feeder with more seeds—in a mad world where trust often seems all but non-existent.

"A poem ought to come from the feelings the chickadee arouses, yet it doesn't, with me. Nor does my watching the 'frolic architecture of the snow.' I am more concerned about my growing less and less poetic than I am about decreases in my income. For everything that makes life worth living is poetic in value.

"I still insist on reading into the meanings of MacLeish's *IB* the conclusion that love of God and love of life are equivalents, that Job saying, 'Though he slay me, yet will I trust in him,' is echoed by another saying, 'Though life beats me up, still will I want more life and love it.' And that's the kind of vitality that sees life poetically."

Address your "Windfalls" contributions to Henry Bailey Stevens, American Fruit Grower, Willoughby, Ohio.

NEW FMC HYDROBRUSHER PUTS PROFIT INTO PREPARATION OF HIGH-FINISH FRUITS



Load up for a clean profit with FMC's new Hydrobrusher for apples, peaches, tomatoes—any tender-skinned produce! The FMC Hydrobrusher gives you 4 profit-boosting benefits:

l. Harvest WET, and pack clean, dry fruit any time—even in the "dewy morn" and rainy seasons! Eliminates problems from condensation on C.A. storage apples.

2. Wet-brushed fruit means better acceptance - profit!

3. "Wet" brushing cleans cleaner than old-fashioned dry method!

4. Installation accomplished without disrupting your packing house layout!

 Cleaner, more comfortable packing house conditions through eliminating peach fuzz, dust, spray residue!

Begin now to enjoy the biggest advance in the packing industry since FMC brought you Stericooling! Specify FMC Hydrobrusher for peach packing in any weather—and for clean-packing apples, tomatoes, and other tender-skinned produce. Write for descriptive brochure about the FMC Hydrobrusher and FMC's personalized engineering services that help it do a better job in your plant!

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You can put the Wisconsinpowered Ariens Trans-A-Matic Tiller to work as soon as ground conditions permit. You can keep on tilling without missing a lick. And when the job's done, the 18hp heavy-duty Wisconsin makes the tiller available for preparing seedbeds and for mulching.

In heavy-duty tilling, as on other tough jobs, it's the power that counts. The Model THD engine is precision-built to both drive and operate the tiller - and to withstand the grueling power demands. Its high torque eases it through the heaviest and hardest sod without stalling or time loss.

The THD has tapered roller bearings to absorb all thrusts. The engine also features Stellite exhaust valves and inserts plus positive rotators, for better engine performance and to give up to 5 times longer valve life!

Protect your profits and livelihood by using equipment powered by rugged Wisconsin Engines, 3 to 56 hp. Electric starting available for all models. Get Bulletin S-249. Write Dept. F-31.



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spreader with the controllable spread"

Apply mouse bait, cover crop and fall fertilizer now in hours instead of days.

- 1. Control the width of spread from 2 to 40 ft.
- 2. Direct spread wherever desired.
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Why be satisfied with a one spread type applicator? P.T.O. driven, Now with quick mount attachments. Available in trailer or tractor mounted models.

SKIBBE SEED & FERTILIZER SPREADER, SODUS, MICH.

YOUR ANSWER?

(Continued from page 12)

Estimated deductions on this capital investment of about \$17,000 are.

Interest		850
Depreciation		1,000
Repairs		500
Taxes		200
Insurance	***************************************	200
	-	
		2,750

This leaves a labor income of roughly \$7000. The question that immediately comes to mind is: Is this enough to support a family of four in Ohio? Probably the answer must be put on an individual basis; some families would be satisfied with this income while others would not find it adequate.

The prime environmental factors in fruit farming are a frost-free, well-drained site in a location available to customers.

Perhaps the next most important consideration is the family labor supply. Will the wife enjoy running a roadside market where most of the sales will take place on weekends and the hours are long? In a one-man operation, the husband can't do it himself. Will the children pitch in?

The family will have to be happy with this kind of life and this type of farming if the fruit farm is to

What do others think of this plan? What are the flaws in it? We consulted with fruit growing and marketing specialists in New York, Michigan, and Ohio, and not one gave a definite "no," but all raised caution signals.

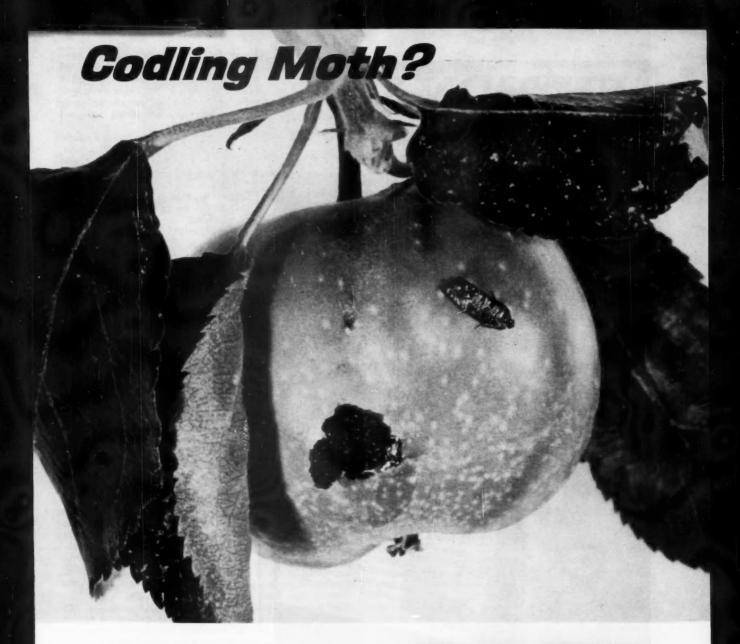
Eldon S. Banta, extension horticulturist at Ohio State University, points out that the questions on family labor supply are pertinent and real since they may mean the difference between success and failure.

In considering capital investment, Banta thinks a tool shed, packing house, and possibly a small storage of around 2000 bushels capacity should be included. He estimates cost of these buildings at about \$4500.

To determine the investment and returns for the first five years, Banta recommends that Walters set up an annual investment and returns schedule. It will take from eight to 10 years to get such a diversified program on a sound and profitable basis, Banta says.

"I believe it is worth it," he adds, "and a possible net income of \$5000 to \$7000 could be realized by that time or soon after.

A Robert Earl, county extension director, Paw Paw, Mich., believes that the estimates of income and production are on the optimistic side



SOCK EM with SEVIN

Everywhere apples are grown, SEVIN gives outstanding control of codling moth. This is true even where codling moth has developed resistance to other insecticides. Stings, wormholes and unmarketable fruit are reduced to a minimum when you use economical, efficient SEVIN insecticide.

SEVIN also controls many other major insect pests of apples, pears, peaches, plums, prunes, grapes, cherries and strawberries. When applied according to label instructions, SEVIN can be used right up to the day before harvest on most fruits to control late-season insect attacks that ruin market value.

SEVIN gives long-lasting control with minimum applications and is safer to use than many other insecticides. No special protective clothing is needed—just use normal precautions. You can get SEVIN in spray or dust formulations to fit all your needs. When insects attack—it pays to SOCK 'EM with SEVIN!

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producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap, Duraset.

and that it would take an ideal location and site for the growing of all the fruit crops suggested. He points out that blueberries are a very specialized crop that are adapted only to certain types of terrain, soil, and pH conditions.

Earl thinks the labor income should be revised to \$4500 to \$5000 a year, taking into consideration frost and other unseasonable weather conditions, and disease and insect infestations that might cause sizable damage to one or more of the fruit crops being raised.

He urges that Walters retain his teaching status, at least during the years of development.

B. A. Dominick, Jr., associate professor of marketing at Cornell, agrees with Earl that the average labor income would be closer to \$5000 than \$7000. He thinks the estimates on average prices are high and that in computing yields, not enough allowance was given for possible cuts due

to adverse weather conditions.

Dana Dalrymple, of Michigan State University, concurs that the suggested yields and prices are high. Spoilage, inferior quality, etc., would cut the amount that could be sold at the indicated price, he points out, and apples, for example, might more nearly average 75 cents a peck than \$1.00.

In Dalrymple's opinion, capital investment might be greater than noted if buildings are included on the land and if a good site is to be found on a main highway. He thinks that the initial cost of trees and plants might be considerably higher than \$1000.

Dalrymple, too, suggests that Walters continue with his teaching job until he is sure how the roadside business is going to go.

Concerning the planned acreage guide, the experts agree that apples and peaches should make up the greater part of the acreage.

Both Dalrymple and Banta question an acre of pears because of production problems. However, Dalrymple recommends trying a few Seckels as a specialty item. Banta believes that an acre of prune plums and an acre of Montmorency cherries might return more per acre with less disease hazard.

Dalrymple suggests planting a few plum trees, both Japanese and Italian types, and cherries. He believes consideration might be given to reducing the raspberry acreage and expanding the strawberry acreage to 2 to 3 acres, using the pick-it-yourself method if there is a shortage of pickers. He thinks grapes might be considered.

As for marketing, M. E. Cravens, professor of agricultural economics at Ohio State University, says that retail selling at roadside will just



Moves fruit <u>FAST...</u> in orchard or shed

(and what a deal you can get now on this CASE, 210 Tractor-Loader!)

Here's husky, compact loading power that gets around fast in orchard or shed...lifts half a ton of produce 10 feet 5 inches for stacking or loading in trucks. Handles pallets or boxes when loader is equipped with pallet teeth...dirt, lime, fertilizer, snow or other loose materials with buckets (11, 13 or 18-cu. ft.). Pallet teeth also available for rear hitch...lets you move crates and boxes front and rear. Versatility unlimited with rear blade, dozer blade, crane boom, backhoe and terra-scoop.

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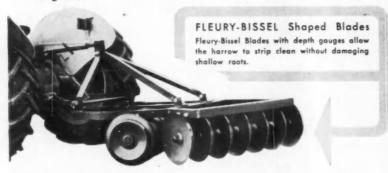
Read what John Archer, owner of 225 acre vineyard at North East, Pa., says about AMC

ORCHARD HARROWS

"We have been using an AMCO disc for maintaining our vineyard. This flange type disc does a good job of discing in cover crops and controlling weed growth. The flange type blades control the working depth of the disc.

"Roots of a grapevine are pretty close to the surface and actually run from row to row. In our maintenance work, we do not want to cut any more of these roots than is absolutely necessary. Still we must control weeds and disc in cover crops. The weight of your disc and the angle at which it is set does this job remarkably well with practically no damage to roots.

"Another feature we like is that your disc requires no maintenance and the factory sealed bearings guarantee long life."



AMCO Grove and Orchard Harrows are specialized machines designed for this work. Not a rehash of a field harrow but a development of years of research from California to Florida to Maine. Write for complete data.

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about double the gross from an enterprise where family labor is available and the site is favorable both from a production and a marketing standpoint.

He believes retail selling is a very effective means of increasing returns, and, in this particular enterprise, suggests expanding the line of production to include some vegetables, honey, maple syrup, and eggs.

"Walters cannot expect to have his market start in full bloom on a \$18,000 sale, however," Cravens warns. "Instead he will have to nurse it along with increases in the number of customers depending on how good a job he does to satisfy them."

Cravens points out that the planned fruit planting is not large enough to keep a grower busy during the win-ter. To keep himself fully employed, Walters might continue his teaching job, increase his acreage, or operate a year-round roadside selling operation, Cravens suggests.

In Dalrymple's opinion, there is a much greater potential for roadside marketing in the Midwest than is being effectively exploited.

Dominick is also optimistic about retail marketing. He predicts that roadside selling will become more important in the future due to population increases and the movement of people to the suburbs.

While Earl emphasizes the necessity of the family working together as a unit to market the fruit through a roadside stand, he cautions that this involves long weekend hours and that success can come only after the grower has developed a good reputation in his community for producing top-quality fruit.

Banta stresses the importance of locating the fruit farm and market in the vicinity of Wooster on or near U. S. Routes 30, 3, or 250, the heaviest traveled highways in the county. He believes that local people are the largest, most dependable customers.

There are also important cultural factors to consider including choice of varieties, close tree spacing to obtain highest early yields per acre, ample space for rotating strawberry and raspberry plantings, irrigation.

In conclusion, assuming that the site is right, that the family will take to fruit growing and roadside selling, that the grower is skilled enough to get top yields and quality, that he will proceed cautiously and keep his present job until he is assured that the fruit farm is a paying proposition, we believe there is a good chance for success.

Now that you, our readers, know what AMERICAN FRUIT GROWER and the experts think about this new fruit farm venture, what would be your THE END.

PROTECT

THE BEAUTY

OF YOUR

TREES

FRUIT-O-SCOPE

SPECIAL MARKET REPORT MARCH, 1961

AMERICAN FRUIT GROWER

Cranberry table syrup has made its debut in Massachusetts. About 12,000 4-H boys and girls introduced the new product...packed exclusively for them by Ocean Spray growers co-op. If cranberry syrup catches on in the Bay state, consumers can expect it on markets elsewhere in the future.

Bartlett pear growers in the East may strike it rich in the next few years if they heed the advice of William Sherman, of New York State Canners and Freezers Association. He says plant pear trees. According to Sherman there's a big demand for pears for processing that's bound to grow...especially for baby food. New York baby food processors had to import 3800 tons from California in 1960 to complete their packs.

Look for an expanding peach industry in south Georgia. Reports indicate there's been a big increase in the setting of peach trees in the area...20,000 in one county alone ... all of the Maygold variety.

Two new Internal Revenue rulings will save growers some tax dollars. The cost of fertilizer, lime, and other soil enrichers and conditioners is now fully tax deductible in the year the material is applied. Also, losses caused by "sonic boom" may be deducted in figuring income tax. They're now considered casualties, the same as storm or fire.

What's the future for red raspberries in western Washington? Gloomy! The red raspberry industry that once flourished there is definitely on the decline. Unless intensified research can find a way to solve the disease and insect problems that are afflicting the berries, there doesn't seem to be much hope.

In the report, "Market Potentials for Apple Juice and Cider," author Dana Dalrymple predicts the market for apple juice and cider will expand. Canned apple juice will continue a gradual increase in popularity...apple cider has the greatest potential if growers employ improved production and marketing methods ... frozen concentrated apple juice may attain popularity if strongly promoted.

The nation's farms produced record crops with fewer workers in 1960 than in any other year, according to USDA. Worker numbers dropped 4% below 1959, the previous low, to an annual average of 7.1 million. Hourly wages paid by growers were up 3% from January a year ago.

How to keep up with the peach market East of the Mississippi: Smaller packages and better consumer packs are needed. So are improved methods for picking and packaging. Better plant varieties that ripen in succession to extend the marketing season, says Curt Eckert, leading peach grower.

Where's the citrus industry going? About one-third of the total citrus crop and nearly one-half of the orange crop are now being consumed as frozen concentrate ... and the demand is increasing. Minute Maid aims at national distribution this year of a new frozen concentrate product...banana-orange juice.

Here's a shocker... Reports are that "Harvest of Shame" was produced by Organized Labor at a cost of \$300,000 and sold to CBS.

STATE NEWS

The Business Side of Fruit Growing

KENTUCKY

Peach Pruning Conference

THE 20th consecutive annual meeting of Midwest Peach Pruning Conference is planned for March 17 at Frank Street's Cardinal Farms, Henderson. Those planning to attend are advised to dress warmly.

Last year 14 states were represented at the conference which was attended by approximately 250 growers and horticulturists.

CALIFORNIA

Streptomycin Use Simplified

CHANGES in pesticide registration which will simplify the use of streptomycin for fire blight control on apples and pears, and blight control on walnuts are part of the changes in the 1961 University of California spray schedules. Last year's requirement stipulated that streptomycin must not be applied after first fruit is visible.

Under the new registration, based on USDA regulations, streptomycin sprays and dusts may now be applied up to 90 days before harvest in the case of pears and 120 days before harvest in the cases of apples and walnuts. These changes mean that growers may use streptomycin sprays and dusts throughout the blight danger season.

INDIANA

Centennial Celebration

NDIANA Horticultural Society held its 100th annual meeting at Purdue University in January in joint session with American Pomological Society. Members heard fruit leaders from various parts of the United States speak on cultural practices, varieties, and marketing methods.

Dr. J. R. Magness, USDA (retired), told Hoosier growers that the water-holding capacity and drainage of orchard soils are extremely important factors in successful fruit production. During an average summer, mature fruit plantings (40 apple trees per acre or 80 peach trees per acre) use 1 acre inch of water each week, he reported.

Stanley Johnston, Michigan Experiment Station, South Haven, presided over a variety discussion. Taking a quick hand survey, he found apple growers are producing mainly Delicious, Jonathan, Golden Delicious, Rome, Stayman, Turley, Grimes, and McIntosh. Growers indicated that they would plant chiefly the first three varieties, if they were planting this spring.

Peach growers revealed that Elberta is rapidly losing its prominence as a fresh market peach. Redskin is replacing it in Elberta season, and earlier varieties, such as Sunhaven, Redhaven, Triogem, and Richhaven, are also popular.

Fred Burrows, International Apple Institute, informed members that the key to successful orcharding involves keeping a portion of their planting young, efficient production, heavy yields per acre, and intelligent marketing. Since only 1782 chain store offices buy 84% of the food, orchardists will need excellent sales management to meet modern marketing problems, Burrows said. The need is for fewer but more educated salesmen.

NEW JERSEY

CA Regulations Considered

A COMMITTEE to consider regulations to govern the controlled atmosphere method of storing apples has been appointed by New Jersey Apple Industry Council, State Department of Agriculture. In appointing the committee, Apple Council Chairman John H. Barclay, Cranbury, stated that most states where CA storage is in use have adopted specific control regulations.

New Jersey growers using the method, he said, should be protected both when they ship out of state or when others ship into New Jersey. Such regulations, he pointed out, would also protect the consumer, assuring her that apples marked "from controlled atmosphere storage" are the genuine article.

WASHINGTON

The Big Problem

A HARD, realistic look at harvest labor problems facing Pacific Northwest fruit and vegetable growers was featured at the 51st annual meeting of Western Washington Horticultural Association at Puyallup early in January.

Speaking for organized labor,



Officers of American Pomological Society for 1961 are, left to right, George Kessler, East Lansing, Mich., secretary-treasurer; W. H. Upshall, Vineland, Ont., president; Paul Shepard, Mountain Grove, Mo., director; and W. A. Luce, Yakima, Wash., vice-president. Other directors, not pictured, are R. B. Tukey, Lafayette, Ind., and A. P. French, Amherst, Mass.

Harry Tucker, Seattle AFL-CIO representative, told of unionization now underway in California, aimed at alleviating what he termed "intolerable" conditions. In answer to questions from the audience, he said that he knew of no plans to organize farm labor in Washington or Oregon in the immediate future and that a closed shop would be impractical for migrant workers.

The grower's viewpoint was voiced by several speakers. Fred Heringer, California Farm Bureau vice-president, said that if farmers live up to their responsibilities in providing adequate wages, housing, and working conditions, union membership will not be attractive to farm workers.

"I know of no permanent full-time farm worker in California who has joined a labor union," he declared. Scientific labor management to motivate workers and encourage productivity is as important as management of land, machinery, and capital, he said, and suggested that the subject be taught at colleges of agriculture.

Willard Hess, Quincy fruit grower and member of Washington State Farm Bureau labor committee, charged that unnecessary "fine print" provisions in existing migrant housing regulations provide loopholes for possible labor disputes and called for a more reasonable interpretation of the term "adequate."

That growers can aid greatly in solving their own labor problems through co-operative action was the conclusion of a panel moderated by

(Continued on page 42)

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100% water-soluble Sul-Po-Mag helps you uprate fruit crop firmness and flavor!

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APPLES — Readily available Sul-Po-Mag prevents magnesium deficiencies common to over half of all apple orchards. Its sulphate form of potash guards trees against chlorine injury.

checking crop fertility. The fertilizers you use have a direct effect upon fruit quality.

If you are not already using Sul-Po-Mag — double sulphate of potash-magnesia — it can be your answer to better market acceptance and profit. Water-soluble, magnesium-rich Sul-Po-Mag is granular. It times its release of potash, magnesium and sulphur for seasonlong feeding action. Its magnesium-potash balance helps your crops make better use of other plant foods. This means better tree health, more vigorous fruiting ... more uniform-sized fruit, richer color ... improved firmness and flavor ... better shipping quality.

Your dealer can supply you with mixed fertilizers containing Sul-Po-Mag—your best buy for better fruit!



This seal is your assurance of extra-value fertilizer

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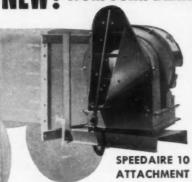
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MARCH, 1961

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STATE NEWS

(Continued from page 40)

Clint Okerstrom, Olympia strawberry grower. Grant Chilton told how businessmen and farmers in his community of Lynden co-operated last harvest season in a successful campaign to recruit local labor to harvest the strawberry crop.

Other panel members, including Milton Sakuma, Mount Vernon, Wash.; Harold Illman, Snohomish, Wash.; and Art Iwasaki, Hillsboro, Ore., pointed out that migrant labor is essential in many areas and agreed that group effort to make best use of available help and to provide attractive working conditions helps to ease the grower's problems.

OHIO

Mechanization Cuts Costs

THE 114-year-old Ohio State Horticultural Society held its annual three-day meeting in Cleveland in February. Tribute was paid to Carl W. Ellenwood in electing him to the dual offices of president and secretary of the society for 1961. Ellenwood recently retired as pomologist at Ohio Agricultural Experiment Station after nearly 50 years of service.

Elected vice-presidents were Sam Patterson, Chesterland, and Tom Price, Newark. I. P. Lewis, New Waterford, was re-elected treasurer.

One of the highlights of the meeting was an illustrated talk by H. P. Gaston, of Michigan State University, research specialist on laborsaving devices for the fruit grower. He pointed out that fork-lift trucks are the key to efficient fruit handling. One fork lift can stack crates 10 to 15 times faster than by hand with a saving of 10 to 15 cents per crate and with less damage to fruit than hand labor.

Gaston also discussed the advantages of bulk boxes which save time, money, labor, and still maintain fruit quality, and mechanized dumpers that do less damage than hand work even to such soft fruits as the McIntosh apple.

He told growers that with onethird of Michigan's apple crop going to processors, mechanized picking is developing very rapidly for processing apples and also for processing pears.

A prominent fruit grower and widely known horticulturist, Herman L. Mantle, Painesville, died in January of a heart attack. He was

Mantle was active in apple growing in the area since 1911 when he founded the family orchard with his father. Named Ohio Farmer of the Year in 1950, Mantle was one of the organizers and past president of Ohio Apple Institute and acted as its secretary for the past 20 years. He was also a past president of Ohio State Horticultural Society.

GEORGIA

Peach Growers Meet

AT the annual meeting of Georgia Peach Council in Griffin, George King, director of Georgia's experiment stations, told members that their group is one of the most progressive agricultural commodity groups in the state. "At least 60% of the 4 million peach trees in Georgia are made up of the nine new varieties developed at USDA's field station in Fort Valley," he said.

Marketing came in for its share of attention at the meeting. Jack Nisbet, president of Agriculture Selling, Columbus, Ohio, spoke on the value



Georgia Peach Council executive committee members are, left to right, Ray Livingston, Athens, horticultural advisor; Edgar Duke, Jr., Fort Valley, president; Grady Riggins, Woodbury, retiring president; Hubert Hancock, Thomaston, second vice-president; and C. L. Mason, Madison, secretary-treasurer. W. N. Harden, Commerce, first vice-president, is not

of an efficient selling program, "Unless we get 99% of the peach growers to do a selling program, you are facing disaster," he warned growers. A resolution adopted by Georgia Peach Council asks for a study of the peach marketing situation and formulation of a more orderly program. It also asks that Commissioner of Agriculture Phil Campbell enlist the aid of the extension service, experiment stations, and Farm Bureau in exploring possible benefits of the new Commodity Authority Act amendment to the Georgia Constitution and draw up enabling legislation for presentation to the current legislature. The amendment allows commodity groups to raise money for promotional purposes.

Irrigation is becoming more widely used in peach production, Extension Engineer Willis Huston reported. He said that irrigated peaches have given greater quality and quantity than others in the same area and of the same variety which needed water. Irrigated fruit is usually ready for market four to seven days before

that not irrigated.



Mr. Henry W. Miller, Jr., examines a Guthion protected apple grown to be sold in the company's domestic and foreign markets under the well-known

"Mountaineer" brand. Guthion so effectively controlled major fruit pests on the entire 1500 acres that two complete cover sprays were eliminated.

"Guthion so effective it eliminates two cover sprays . . . gives us substantial savings in spray costs"

Says Mr. Henry W. Miller, Jr., President of Consolidated Orchard Co., Paw Paw, W. Va.

"Guthion is the nearest thing we have ever found to a perfect insecticide"

"In 1959, we sprayed 200 acres of our apple trees using the new Guthion program and found it to be so successful that in 1960, we expanded the Guthion program to our entire 1500 acres, containing approximately 51,000 trees," Mr. Miller reports. "Not only is Guthion of particular value because of its insecticide properties, but unlike many other sprays, Guthion is not damaging to fruit finish or foliage. Our 1960 crop was one of the cleanest we have ever produced."

Guthion saves, cuts out two sprays

"We found our big savings in using Guthion was the complete elimination of two cover sprays for insect control," Mr. Miller continues. "Last year we started spraying with Guthion at petal fall. But the second and fourth cover sprays were eliminated when checks of the orchard revealed they were unnecessary because of the remarkable killing power and long lasting effectiveness of Guthion. In the past, five to seven cover sprays have been necessary for insect control in this part of the country. But with Guthion, we are now able to maintain commercial control of all major fruit insects with only four cover sprays during the season, except for one specie of mite which under certain unusual conditions makes it desirable to combine a miticide in one or more of the regular Guthion applications.

The elimination of two cover sprays results in substantial savings by reducing the man hours previously spent by our spray crew, fuel costs and the wear and tear on \$100,000 worth of equipment. We were surprised and gratified to discover that Guthion, which is considered an expensive material actually results in lower overall insect control cost."

Guthion eliminates complicated mixing

"Spraying had become increasingly complicated due to the many chemicals formerly required to control all the major fruit pests," concluded Mr. Miller, "The old so called standard formulas we used before Guthion often included four or more different insecticides which made precise mixing most difficult. Using one chemical, Guthion, not only simplifies our mixing problem, but at the same time provides the finest insect control we have ever experienced."

Higher profits from Guthion

Here's why Guthion means more fruit profits for you. It is the *only* single insecticide that controls *all* major fruit pests, *all* season long. Guthion alone equals or surpasses the control of any complicated combination of chemicals.

Guthion lasts longer, too . . . eliminates worry about special insect build-ups, specific timing and between cover sprays. To reduce your spray costs and get better insect control this season, use Guthion. It works!



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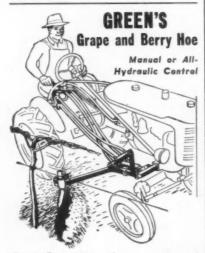
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PACKAGING & MARKETING

Promotion Pays Off

SALES of apples rose considerably during a special promotion sponsored by Washington State Apple Commission in 72 supermarkets in six midwestern cities, according to a USDA report.

The promotion consisted of newspaper and television advertisements and special displays in stores. It emphasized either the use of apples in salads, pies, and other dishes, or the healthful qualities of apples.

Sales of Washington State apples were 32% higher during periods of promotion using the apple-use theme and 21% higher for the health theme. Sales of all apples, from Washington and other areas, were 20% higher for the apple-use theme and 9% higher for the health theme. Orange sales also rose slightly when either theme for apples was used.

The USDA study was part of a program of research designed to expand markets for farm products.

Handbook on Diseases

HANDBOOK designed to aid in recognizing, identifying, and controlling market diseases of grapes and other small fruits has been published by USDA. Colored illustrations and descriptions of the most common economically important diseases are included as well as a list of additional sources of infor-

A copy of the handbook, Market Diseases of Grapes and Other Small Fruits, may be obtained from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Ask for Agricultural Handbook No. 189 and send 30 cents to cover cost.

Marketing Challenge

N opening day of New York State Horticultural Society's 106th annual meeting in Rochester, President Thomas Albright, Athens, told growers that prospects are good for a sizable apple crop this fall and urged them to get together to meet the challenge of marketing it.

In a move to improve marketing methods, a resolution was passed by members to encourage growers of both fresh and processing apples to use the services of large selling organizations to meet the needs and buying power of chain stores. It was also recommended that members work toward the merger of these selling organizations into one or more large, strong selling units with professional sales management.

In another resolution members endorsed an amendment to the Federal Marketing Agreement Act to include both fresh and processed apples. Other resolutions commended the State Department of Agriculture and Marketing for successfully administrating marketing orders for apples and cherries and Western New York Apple Growers Association and New York and New England Apple Institute for their excellent promotion of apples.

The three-day meeting was held jointly with Empire State Potato

Calendar of Coming Meetings & Exhibits

Mar. 3-Pear Day, University of California,

Mar. 4-Peach Day, University of California,

Mar. 8—Dwarf Fruit Tree Association annual meeting, Hill Top Orchards, Hartford, Mich.—R. F. Carlson, Sec'y-Treas., Michigan State University, East Lansing.
Mar. 17—Midwest Peach Pruning Conference, Frank Street Orchard (Cardinal Farms) Hender-

son, Ky.

Mar. 19-25—Caribbean Region, American Society for Horticultural Science annual meeting, Miami, Fla.—E. H. Casseres, Sec'y-Treas., Londres 40, Mexico 6, D.F.

Mar. 20-23—National Conference on Handling Perishable Agricultural Commodities, Purdue University, Lafayette, Ind.

Mar. 21-23—Corpell's Agricultural Progress

Mar. 21-23—Cornell's Agricultural Progress Days, Cornell University, Ithaca, N. Y.

Days, Cornell University, Ithaca, N. Y.

Mar. 22—Northern Illinois Horticultural Society annual meeting, Clark Hotel, Princeton.—

Bob Rogers, Sec'y-Treas., Illinois Fruit Council,

305 W. Walnut St., Carbondale.

Mar. 22-24—Horticulture Short Course, University of Minnesota, St. Paul.—J. O. Christianson, Director of Agricultural Short Courses, University of Minnesota, St. Paul.

Mar. 29-30.—Fruit and Vegetable Storage In-

Mar. 29-30—Fruit and Vegetable Storage In-estigation Conference, University of California,

Davis.

Apr. 2—Michigan Nut Growers' Association annual meeting, Michigan State University, East Lansing.—Michigan State University Information Services, East Lansing.

Apr. 9-12—National Association of Produce Market Managers convention, Ocean Forest Hotel, Myrtle Beach, S.C.—Jules S. Cherniak, Sec y-Treas., Div. of Markets, New York State Office Bidg., Albany 1.

Apr. 27-29—Shenandoah Apple Blossom Festival, Winchester, Va.

vai, winchester, va. May 4-6-Washington State Apple Blossom Festival—Mrs. Ginny Hopkins, Publicity Director, 128 S. Wenatchee Ave., Wenatchee. May 26-27—Edible Tree Nut Conference, University of California, Davis.

June 13-16—National Apple Institute annual teeting, Browns Lake Resort, Burlington, Wis. -Patterson Bain, Exec.-Vice Pres., Washington ldg., Washington 5, D. C.

June 15-Small Fruits Day, Ohio Agricultural Experiment Station, Wooster.

June 19-24—Pacific Division American Association for the Advancement of Science, Universtiy of California, Davis.

June 20—Summer Orchard Day, John Tanner Orchards, Speer, Ill.—Bob Rogers, Sec'y-Treas., Illinois State Horticultural Society, 305 W. Wal-nut St., Carbondale.

Aug. 3-Orchard Day, Ohio Agricultural Experiment Station, Wooster.

Aug. 22-23-Ohio Pesticide Institute, Ohio Agricultural Experiment Station, Wooster.

Aug. 25-Maine Blueberry Festival, Union Fair Grounds, Union.—Ivan Sherman, Chairman,



CYPREX TAKES THE WORRY OUT OF SCAB CONTROL... EVEN IN THE WORST WEATHER

Cyprex sticks even through heavy rains. Rain actually helps Cyprex cover up new growth! Read how Cyprex protects, eradicates to give you near-perfect scab control.

When a fungicide is washed off foliage by heavy rains... both protection and the money you paid for it go down the drain. Cyprex 65-W is different. It has a built-in sticker that helps it resist weathering and keeps a tough fungicidal barrier on fruit and foliage. Cyprex also enters leaf tissue, and protects against scab "from the inside out." Result: Cyprex takes the worry out of scab control in any weather.

How rain helps Cyprex cover up new growth

Cyprex is so potent against scab that tiny quantities, splashing from sprayed foliage to new growth, spread out and protect newlyemerged leaves and growing fruit. (How can Cyprex stick tight, yet be spread by rain? It's something like rinsing detergent from a pail . . . some foams out, but most will resist washing and stay behind.)

How Cyprex eradicates scab... brings you through emergencies

Even the most careful schedule can break down. For example, you may not have used Cyprex . . . a sprayer may have broken down . . . or you may have missed timing during an infection period. In cases like these, the "kickback action" of Cyprex can help get you out of trouble. Cyprex actually seeks out and eradicates scab infections when sprayed from 28 to 48 hours from the beginning of the wet period . . . depending on the rate of Cyprex used.

New for '61: protectant rate cut in half

Because of its remarkable record against scab, Cyprex has been accepted by the USDA for protectant use at the new low rate of ¼ to ½ lb. per 100 gallons through first cover, and % to ¼ lb. for later sprays. This means you pay no more for a protectant schedule with Cyprex — the best scab protection you can buy — than for a so-called "low-cost" funcicide.

And now, all-season protection! In 1961, you can use Cyprex from green tip to seven days from harvest.

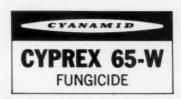
Free leaflet — Complete instructions for use on apples, pears, cher-

ries. Send for leaflet PE-5061: Cyprex 65-W. American Cyanamid Company, Agricultural Division, New York 20, N. Y.



Available in 2½-lb. bags and 25-lb. cartons.

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Fastest pruning tool ever devised



demonstration

KWIK KUT SAW DISTRIBUTOR CO.

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VERTICAL INTEGRATION

(Continued from page 14)

ordination, as well as the possibility of further economic gain, justified the risk.

From the grower's standpoint this integration can mean that it will be more difficult to determine a realistic price for the raw product he sells. since the raw product produced and used by the processor in his own processing operations is not bought and sold on the open market where forces of demand and supply establish price.

On the other hand, growers may go into processing through the formation of processing co-operatives. Just as processor may see advantages in descending integration, so growers may see advantages in ascending integration. This trend no doubt reflects growers' interest in increasing returns by performing additional marketing functions, as well as having closer control over their products as they move through the marketing channels from farm to consumer.

Among the problems facing growers in entering this type of vertical integration are those of employing skilled management, and obtaining the relatively large sums of capital needed for an efficient modern plant. Though other problems are involved, growers in recent years have purchased a number of "going concerns." They have thus avoided over-capacity in the industry, and at the same time they have obtained a plant operating at low cost with established markets for its products.

Another difficult though less tangible problem comes when growers extend their thinking to marketing problems that are regional or even national in scope. Operating an orchard today is a highly specialized job requiring tremendous energy and management skill-but it is necessarily local in nature. Marketing their crops in processed form requires that growers think in broader terms.

Marketing the processed product effectively may prove to be a more difficult job than the actual processing. Today many processing cooperatives are striving toward larger operations, and in some cases a number of associations are working together to develop federated types of sales organizations.

In the marketing of fresh fruits and vegetables we can see changes taking place, too, as various marketing functions are becoming more and more integrated.

For example, until recent years the terminal markets established what was essentially a competitive price. The forces of supply and demand were adjusted through the interaction of many buyers and sellers.

Today more and more buyers are bypassing the terminal market and are buying direct from the production areas. Thus, for some commodities, prices in the terminal markets may be based on such a small percentage of the total volume marketed as to be almost meaningless as price barome-

There is a growing concentration of buying strength into fewer and fewer hands. Large volume buyers have changed from what was formerly a more or less passive role in purchasing supplies as offered to an active role of aggressively procuring the commodities on a specification basis according to their needs.

These changes in the marketing of fresh fruits and vegetables are examples of descending integration, and no doubt this type of integration will grow in importance. In addition, this type of integration can be expected to appear in other forms, such as in the use of contracts for procuring supplies and in more processing and prepacking of produce by large-scale buyers. On the other hand, the risks and management problems involved in retailer-owned production seem to limit descending integration and preclude actual production.

The ascending type of vertical integration, or integration from the farm toward the retail level, offers real opportunities to organized growers as well as advantages to retailers. By developing effective marketing cooperatives, growers can perform useful services to the retailer groups at the shipping point level. Growers can jointly provide the large volumes of products in the form and of the quality and at the time needed by largescale buyers.

In certain special situations the roadside stand or store-door deliveries may offer possibilities. These are particularly attractive when growers can obtain for themselves the marketing margin between farm and retail prices.

Our economy is increasingly characterized by change-change taking place in various forms and at varying rates among different commodities. Vertical integration—the term used to describe many of these changes-is an economic fact, and in my opinion it can't be stopped although it can be shaped and controlled. This can best be done by the organized joint effort of producers through the mechanism of co-operatives.

This method offers growers a selfhelp means for retaining their independence as individual farm operators while at the same time it provides an efficient method for meeting the needs of our modern, growing, changing mass-distribution system of food marketing. THE END.

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But this red mite and his summer cousin, the two-spotted mite, have whale-sized appetites. They can reduce yields, impair quality—even have an adverse effect on your orchard for next season if not properly checked. Tedion miticide applied early is the key step toward all-season mite control on apples, pears, quinces, crabapples, nectarines, apricots, cherries, peaches, plums, prunes. It's especially effective in killing young

nymphs of all mite varieties—European red mite, two-spotted spider mite, McDaniel, Canadensis, Carpini, Willamette and Pacific. And its long residual activity keeps killing them between each spray. Highly selective, Tedion is harmless to mite predators; to blooms and foliage. Tedion contains no toxic phosphates and is safer for spray operators; compatibility with common orchard pesticides makes it easy to incorporate in standard schedules, Kill mites before they have a chance at your crop. Early

protection will pay off in better yields of high quality profit-making fruit.

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DIFFERENT—DIFFERENT

THIS NEW BOOM NOZZLE IS ENTIRELY DIFFERENT THAN CONVENTIONAL NOZZLES. BY MAKING A FLAT FAN SPRAY DISTANCES. NEVER DREAMED OF ARE OBTAINED. ONLY A TEST CAN PROVE IT.

For grape and vegetable growers these nozzles are a great improvement over common types.

W. L. HAMILTON & CO.





OUR FRUIT PIONEERS

(Continued from page 9)

Such hybrids include the varieties Kieffer, LeConte, Garber, and Douglas.

Definite efforts to develop apple varieties in this country apparently started in midwestern states where greater hardiness is needed than in most eastern areas. C. G. Patton, of Charles City, Iowa, was breeding apples in 1867 and Peter Gideon of Excelsior, Minn., introduced the Wealthy in 1869. These men grew seedlings from open-pollinated seed but from selected mother parents.

Iowa Experiment Station started breeding apples about 1880. J. L. Budd, the leader of that work, was interested mainly in increased hardiness. Between 1880 and 1890 he imported and began testing many varieties from Russia. These were generally highly acid and of poor quality but they did prove to be hardy, and some have been used extensively as parents.

The Iowa work was continued under the leadership of S. A. Beach, Tom J. Maney, and H. L. Lantz. Several varieties of importance locally resulted.

In Minnesota, state supported work was started in 1878 when a state subsidy was granted to Peter Gideon. In 1890, S. B. Green initiated apple breeding at the state experiment station where it has been carried to the present.

Many workers have contributed during the intervening years, including Charles Haralson, M. J. Dorsey, J. H. Beaumont, William Alderman, and A. N. Wilcox. Varieties of lasting merit from that work include Haralson, Beacon, and Fireside. More recent introductions and selections may prove valuable.

At the Geneva, N. Y., experiment station, apple breeding was initiated by S. A. Beach in 1892 and an extensive program has been carried to the present. U. P. Hedrick, G. H. Howe, and Richard Wellington led the work in the past; L. G. Klein and John Einset are in charge at present.

B. R. Nebel contributed much to our knowledge of chromosome makeup of our apples. Important varieties developed from the New York work include Cortland, Early McIntosh, Lodi, Kendall, Macoun, and Milton. Several recently introduced varieties are promising.

In South Dakota, N. E. Hansen, of the state experiment station, began breeding hardy apples and crab apples in 1895 and continued the work throughout his life. He traveled extensively in Russia, including Siberia, and brought apples and many other kinds of plants to this country. He

named a large number of apples and crab apples, several of which are home varieties for the Northern Plains.

J. B. Keil, of Ohio Experiment Station at Wooster, started breeding apples in 1915. He was followed by C. W. Ellenwood and F. S. Howlett. From this work has come Franklin, Melrose, and several other varieties.

In 1909, C. C. Vincent began breeding apples at Idaho Experiment Station. The work has now been largely discontinued. The Idared from that work appears of lasting value.

In Missouri, apple breeding was started at the state fruit experiment station at Mountain Grove in 1901 and at the experiment station at Columbia in 1905. The Illinois station has conducted apple breeding and genetic studies since 1908, and a limited amount of apple breeding has been done at the experiment stations in Maine and Maryland. Later, the New Jersey and Virginia stations developed apple breeding programs.

At present an extensive project to develop scab-resistant apples is being conducted co-operatively by Purdue, Illinois, and New Jersey experiment stations and USDA in co-operation with several other stations. J. R. Shay of Purdue leads the project.

Selections that are field immune to scab and that produce well-colored fruits approaching commercial size and quality have been developed. Another generation of progeny, representing crosses of these best selections with high quality varieties, may well result in varieties field immune to scab and of acceptable market and processing quality. Such varieties would require fewer sprays per season to produce clean fruit.

During the 18th and 19th centuries there was great interest in pear breeding in western Europe, especially in France and Belgium. Mostly these early breeders grew open-pollinated seedlings to fruiting and made selections from them. The names Hardenpont (1705-74), a priest at Mons, Belgium, and Van Mons (1765-1842), a physician at Louvain, stand out, but many others grew and selected from seedling pears.

Most of the high-quality pears of buttery texture grown in the United States originated from such work in Europe. These varieties are not resistant to pear blight, however, and their production is largely in the Pacific states.

Pear breeding in this country has been less extensive than apple breeding although several experiment stations have done some work. The Geneva, N. Y., station has had a fairly extensive program since 1892, working mainly within the buttery type pears. Several good varieties have been named, the best of which

is probably Gorham. None, however, is highly resistant to blight.

In Oregon, F. C. Reimer grew many thousands of trees from French seed and found a small percentage of them highly resistant to blight. He numbered several of these as seed-source trees for blight resistant roots. He also initiated a program of breeding quality varieties which has continued. Since his retirement from state work, Reimer has continued his breeding efforts. No varieties have yet been named from the Oregon work.

At the Tennessee and New Jersey experiment stations, fairly extensive pear breeding projects are now underway, both directed mainly at blight resistance and both using quite largely Oriental and buttery type pear crosses. In general early generations of such crosses do not yield high

quality fruit.

In the USDA, M. B. Waite started breeding pears with the specific objective of blight resistance about 1908. His early crosses were with Kieffer. That work has continued to the present but in recent years crosses have been among quality pears, some of which have considerable blight resistance.

In 1960, three varieties were named, two of which appear highly blight resistant as well as having good to very good quality. It is now apparent that a high degree of blight resistance and good to excellent quality can be readily obtained in pears.

Breeding of apples and pears is long-time research. Frequently 30 to 40 years will elapse between the time a cross is made and commercial production occurs, even in a very outstanding new kind. Usually eight to 10 years are required to bring the seedling into production and about the same time for a second test of a promising selection.

A new variety may be named 20 years after the cross is made. An additional 10 to 20 years must elapse for growers to evaluate the new variety and bring commercial blocks

into production.

Present-day apple and pear breeders are building on the work of the pioneers in the field. At present, objectives are more definitely defined than in the past. The projects to develop scab-resistant apples and blightresistant pears can be expected to make outstanding progress during the next decade.

The men who are breeding apples and pears are working for future generations of fruit growers. Rarely will the man who makes a cross of these fruits live to see his new variety growing in commercial orchards. He can hope, however, that generations yet unborn may call him blessed for the work he is doing. THE END.

NEW VARIETIES

(Continued from page 11)

periment Station, Experiment. Flesh is jet black, medium firm, with excellent flavor, and with high soluble solids and acid enough for good jam, jelly, and pies. Fruit is large and round, ripening early, June 1-15 at its place of origin. Clusters are large. Bush is very vigorous, trailing, and semi-thornless. Fruiting branches are long, making for easy picking. Early June appears partially resistant to anthracnose and leafspot.

The variety has been tested successfully in Georgia, Mississippi, and Alabama. Since it is somewhat tender to cold, it is recommended only for southern half of blackberry belt. Highly recommended for home gardens because of its early maturity and fine fruit quality.

Lincoln is a seedling of a native Oregon wild trailing blackberry discovered in 1951 by Norwood J. Nute, Siletz, Ore. Fruit is large, but only when grown under cool, moist conditions like near the Oregon coast. Acid content of the fruit is low: processes fairly well. Bush is trailing. Production is rather disappointing.

BLUEBERRY

Collins is result of joint research work by USDA and New Jersey Agricultural Experiment Station. F. V. Coville (USDA) made the cross Stanley x Weymouth in 1936; final hybrid was selected by J. H. Clarke, E. M. Meader, and George M. Darrow.

Fruit cluster size is medium, rather compact, and attractive. Berries are as large as Earliblue, oblate, very firm, light blue, highly flavored, and sweet to mildly subacid. Ripens early, midway between Earliblue and Bluecrop, filling a gap in the ripening season of large-fruited varieties. Fruit does not drop, is resistant to cracking. Fruit does not drop, is resistant to cracking. Bush is erect, well-shaped, vigorous, and moderately productive.

The variety appears to be as winter-hardy as

ately productive. The variety appears to be as winter-hardy as Berkeley and Pemberton under normal conditions. Recommended for trial as a second early large-fruited variety for northeastern United States. Named for Lester Collins (1880-1987), amateur horticulturist and fruit grower.

Woodard originated in Tifton, Ga., by Dr. W. T. Brightwell, Georgia Coastal Plains Experiment Station, and is the result of cross Ethel Callaway. Fruit ripens earlier than other rabbiteye varieties, is large, with excellent appearance and quality. The sear is dry. Woodard holds up well in shipping tests.

CHERRY

Chinook originated in Prosser, Wash., by Dr. Harold W. Fogle of both Washington Agricultural Experiment Station and the USDA. He crossed Bing with Gil Peek and selected Chinook from this progeny in 1954. This sweet cherry is large, heart-shaped to reund. Mahogany skin has glossy surface at maturity, which is 4 to 10 days earlier than Bing. Flesh is medium to dark red, firm, uniformly colored, Medium-sized pit is relatively free. Fruit most nearly resembles Bing. Very vigorous tree is upright-spreading and productive. Flowers one or two days before Bing and leafs out three or four days earlier than Bing. Leaf petioles usually have a few fine hairs.

and lears out three or four days earlier than bairs.

At least in young trees, Chinook is more winter hardy than Bing but less so than Van. It is self-unfruitful, like all sweet cherries, but has been hand pollinated satisfactorily by Bing, Van, and Sam; effective pollinator for Bing, Indexing tests indicate that Chinook is free of harmful viruses.

Rainier originated in Prosser, Wash., by Dr. Harold W. Fogle of both Washington Agricultural Experiment Station and USDA. He crossed Bing with Van which gave a large, sweet fruit, with a flesh firmness of a Napoleon-type cherry, with high quality Juice is clear and coloriess. Fruit is slightly obovate in shape. Skin is yellow with considerable pink blush. Stone is medium to small and relatively free. Ripens 3 to 7 days before Napoleon and Bing. Vigorous tree is spreading to upright-spreading, very productive. Comes into bearing early.

An outstanding characteristic of Rainier is that it is apparently extremely winter hardy, being equal to its parent Van in this respect. Blooms and leafs out with Bing. Leaf petioles are hairless. Self-unfruitful but satisfactorily pollinates Bing very well. Indexing tests indicate that Rainier is free from harmful viruses.

CHESTNUT

Essate-Jap was originated by Arthur H. Graves, Connecticut Agricultural Experiment Station. This hybrid nut ripens early, September 5-20, and most closely resembles the Japanese chestunt. Tree is erect, fast growing, Leaves are rather slender, long pointed, glandular beneath. A reddish color predominates as young leaves are bronzy, twigs dark red, and buds have a carmine hue. Blooms during June 1-15. Tree is blight free and is winter hardy in zone 5 of Rehder.

Kelsey originated in Clinton, Conn., by Josiah J. Kelsey, through Arthur H. Graves, Connecti-cut Agricultural Experiment Station. This is a



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AIR TIGHT

seedling of Castanea mollissima, the Chinesechestnut. Scionwood of a seedling was secured from Luther Burbank, Santa Rosa, Calif., by Kelsey, who crossed it with another seedling. Nut is of Chinese type, small, very dark brown, squarish, Inner skin is readily separable. Meats are yellow, sweet, crunchy. Blight-free tree is winter hardy in Rehder's zone 5.

Myoka originated in Westbank, British Columbia, by J. U. Gellatly. It is an open-pollinated seedling of Chinese chestnut from seed imported frem China 25 years ago. Nut peels well, flavor is good. It is large, averaging about 1% inches in diameter, and resembles Manoka. Tree is large and rated timber type.

Sleeping Giant is another hybrid origination of Arthur H. Graves, New Haven, Conn. Nut is large and shiny. Burr is often slightly conical. Tree is somewhat spreading. It, too, is blight free and hardy in zone 5 of Rehder.

ELDERBERRY

Nova and Scotia were released in 1959 by the originator, E. L. Eaton, Canada Department of Agriculture Research Station, Kentville, Nova Scotia. Both are open-pollinated seedlings of Adams 2. Fruits of both are large, mature early and uniformly in cluster; are sweeter than Kent or Victoria.

GRAPE

GRAPE

Blue Lake comes from Leesburg, Fla., where L. H. Stover, Watermelon and Grape Investigations Laboratory, Florida Agricultural Experiment Station, selected it from the cross of an open-pollinated selection of Vitis smalliana x Caco. Fruit clusters are loose. Berries are uniformly blue with light surface bloom, with flesh spicy and slightly tart. Ripens in late June to late July at Leesburg.

The grapes are adapted for juice, jellies, and preserves. When fully mature, they are distinctive from European dessert types. Blue Lake should be good for home garden in southern states. It has limited value as a fresh-market fruit. Flowers are self-fruitful but, in some seasons, fruit set may be improved by cross pollination with other varieties, such as Lake Emerald. Chilectt, an open-pollinated seedling of Volney, originated in Woodward, Okla., by L. F. Locke, Southern Great Plains Field Station, USDA. Fruit clusters are compact and medium to large, Berries are medium to large, dark-red to nearly black at maturity. Flavor is distinctly muscat, with quality from good to excellent. Chilectt ripens in mid-August at Woodward. Vine growth is medium to vigorous, very drought resistant. Like Volney, it is probably best adapted to the Southwest.

Osborn came from the research work of L. F. Locke, as did Chilectt and Keating, Berry quality is good, with average size, and black. Average ripening time is mid-August in Woodward. Berries store well. A medium-sized cluster is produced. Vine growth is medium to vigorous, being very drought resistant, but is somewhat lacking in winter hardiness. Probably best adapted to the Southwest.

Thornburg Robin is a bud mutation of Cardinal, discovered in 1952 in Litchfield Park, Ariz., by Wayne Thornburg, Fruit ripens about 5-10 days before Cardinal, but is otherwise quite similar to that variety.

MACADAMIA

Burdick originated in Encinitas, Calif., by Ernest S. Burdick and Rodney B. Taylor. A chance seedling, it was selected in 1956. Nut is



Conn. Agr. Exp. Sta.

Essate-Jap hybrid chestnut is blight-free.

large, averaging 40 per pound; shell is thin, being about one-sixteenth inch thick. Each ker-nel weighs about 4 grams, each fills the shell well. Cracks out about 34% of total weight. Tree bears annually, with October being the harvest-time. So far as we know, this is the first ma-cadamia to be patented in the United States.

NECTARINE

NECTARINE

Clinton was found in 1953 in Visalia, Calif., by Clinton L. Hagler, as bud mutation on tree of Le Grand. Flesh is yellow with some red around pit, favor very mild, slight aroma, slightly tart. Quality is very good. It is large, up to 3 inches in diameter, and is a clingstone. Yellow skin is overlaid with red. Clinton ripens about 10 to 14 days later than Le Grand or about 7 to 10 days before Late Le Grand at place of origin, or about July 21 for first shipment. It has good keeping and handling qualities, and resembles Le Grand. Flowers are showy with petal edges slightly ruffled; self-fruitful.

Elbertarine is another California origination, from Farmersville. An Fi Elberta peach seedling x F2 Le Grand seedling. Flesh is yellow, with a mild flavor, resembling Elberta peach. Aroma is pronounced. This freestone has a pale yellow skin, blushed red. Medium-sized fruit has a slight tendency to crack. Ripens with Sun Grand. Flowers are large and leaf glands reniform.

form.

Red King was originated in Visalia, Calif., by Lisle A. Hagler, and is patented. This is a yellow-fleshed freestone, with some red around the pit. firm, melting, flavor sweet and slightly tart, slightly aromatic, and quality very good. At Visalia, it ripens around July 4-6, about midway between Sun Grand and Le Grand. Skin is predominantly red on tree-ripe fruit,

PEACH

Carol was originated in Sigourney, Iowa, by John P. and Minnie K. Tremmel. An open-pollinated seedling of Tremmel (see below). This yellow-fleshed freestone is nonmelting, with some red around pit, mild flaoor: claimed to be good for canning and freezing. Skin is yellow with red blush. It averages 2½ to 3 inches wide. Carol most closely resembles Rochester and is a patented variety.

Dawne originated in Carbon County, Pa., by J. Robert Stetler and is assigned to Bountful Ridge Nurseries, Princess Anne, Md. This chance seedling has yellow flesh, streaked with red, a mild subacid flavor, and is non-browning for 24 hours when the cut flesh is exposed to air. Red skin color appears early over a yellow ground color. This freestone, medium to large, ripens before Cardinal, June God, Dixired, and Redeap, and some two weeks before Erly-Red-Fre. Vigorous tree is winter hardy, being above average in bud hardiness. Chilling requirement is about 750 hours below 45° F. Flowers are showy with pale pink petals. Variety is self-fruitful.

Earlired is another peach in a continuing line from USDA. It is round and attractive, with medium size. Yellow flesh is firm but melting, with medium texture and good flavor. Ripensearly, 2 to 5 days before Cardinal, finishing before Sunhaven begins. About 85% of surface is a bright, attractive red blush over a yellow ground color. Clingstone when firm-ripe, semi-freestone when soft-ripe.

Earlired develops a prominent point and suture when grown far south but shape is satisfactory farther north. Suitable for local market and shipping. Tree is vigorous and dependable in productiveness. Requires early and heavy thinning for best fruit size. Moderately susceptible to bacterial spot. Earlired's chilling requirement is about that for Elberta.

Jefferson comes from joint efforts of Drs. George D. Oberle and R. C. Moore at Virginia Agricultural Experiment Station.

ining for best fruit size. Moderately susceptible to bacterial spot. Earlived's chilling requirement is about that for Elberta.

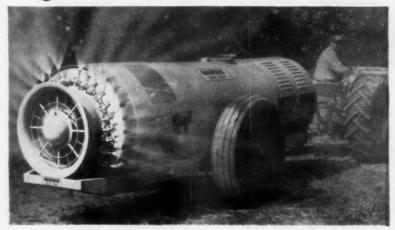
Jefferson comes from joint efforts of Drs. George D. Oberle and R. C. Moore at Virginia Agricultural Experiment Station, Blacksburg. This yellow-fleshed fully freestone is very firm, most nearly resembles J. H. Hale. Skin is a bright red. Vigorous tree is always set heavily with buds. Buds and flowers are tolerant to blossoming-season frost, give a reliable annual crop. It is pollen fertile.

Marcus ripens 2 to 3 days before Mayflower or 10 days before Cardinal. Averages 2 to 2½ inches in diameter, is round and pointed on the tip, being similar to its parent which is Erly-Red-Fre selfed. Yellow flesh is relatively firm for such an early-maturing peach, with no noticeable softening of suture. Skin surface runs about 60 to 70% red over yellow ground color when fully ripe. Tree is moderately vigorous, productive, with showy flowers, is moderately susceptible to bacterial spot. Drs. G. W. Schneider, C. N. Clayton, and F. E. Correll, Sandhills Peach Research Station, North Carolina Agricultural Experiment Station, Jackson Springs, originated this new peach.

Royalvee is another introduction from Vineland Station, Ontario, by Canada Department of Agriculture Horticultural Experiment Station, Ils parentage includes Halehaven, Vedette, and Veteran, Flesh is bright yellow, fairly firm, oxidizes slowly, with good quality. A semi-free-stone but comes reasonably free at full maturity which is two weeks, before Redhaven or about Goldray season, averaging August 5 at Vineland (Continued on page 54)

(Continued on page 54)

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Even with proper fertilization many fruit trees cannot utilize fertilizing elements efficiently because the soil is too acid. In this case, lime

While a soil test cannot solve all your problems, it will show you the plant-food needs of your soil and tell you the soil pH. Here are some simple steps to follow when taking a soil sample for testing.

Avoid taking sample from the fertilizer band. Avoid unusual spots in the planting such as old fencerows, roadbeds, or where lime or manure has been piled.

The soil sample should never represent more than 10 acres and should represent only one soil type and only one topographic condition.

If using a spade or knife to collect sample, dig a spadeful to plow-depth (5 to 6 inches), then throw it aside. Dig a one-half inch slice of soil and keep it on the spade. Use a knife to cut from this slice on the spade a one-half inch core from top to bottom for testing.

In alkali areas sample the soil in 1-foot layers to a depth of 3 feet.

Avoid taking samples when the soil is wet. The best moisture condition for testing is when the soil is suitable for plowing.

You may wish to send the soil sample to a commercial laboratory for analysis or use one of the soil test kits that permit a grower to test his soil for pH, nitrogen, potassium, and phosphorus content. When using these kits, it is important to make certain that glassware is kept chemically clean and that the chemical reagent has not changed in concentration.

In interpreting the test, remember to consider the soil pH, color and feel of the soil, and the crop to be grown.

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NEW VARIETIES

(Continued from page 51)

tation. Tree is very productive, requiring heavy thinning in most seasons, and is thus similar to Veteran. Winter hardy; sets fruit under adverse conditions. Flowers are showy, being similar to those of Veteran; self-fruitful.

Tremmel was originated by Mr. and Mrs. John P. Tremmel. Parentage is unknown. Flesh is yellow with some red around the pit; texture is firm; freestone. It averages about 2½ to 3 inches in width; ripens about August 15-25 at its place of origin, Sigourney, Iowa. Skin is yellow, blushed with red which appears early. Most nearly resembles Rochester. Tree is winter hardy. Flowers are large, pink, fertile.

Washington was produced by Dr. George D. Oberle, Virginia Agricultural Experiment Station, Blacksburg, crossing his selection V.P.I. 15 with Sunhigh, Quality is above average for this yellow-fleshed firm, large, freestone, Skin color is attractive. Most nearly resembles Sunhigh. Showy flowers escape damage from blossoming-season frosts. Follen is viable,

PEAR

Dawn was introduced for trial last year by USDA. It includes Barseck, Bartlett, and Comice in its parentage. Resembles Bartlett's shape but is somewhat smoother and slightly smaller. Very good quality fruit is aromatic, sweet with a trace of acid, spicy, and very juicy; is almost entirely free of stone cells. Ripens for good eating in 2 to 14 days when held at 70° F. At Beltsville, Md., its place of origin, it ripens about a week later than Bartlett, and can be held in cold storage up to 3 months.

Tree is very vigorous and spreading for a pear.

Tree is very vigorous and spreading for a pear. Entirely pollen-sterile, but sets well with all varieties tested. Very resistant to fire blight. Chilling requirement and winter hardiness are not known. Recommended for general trial because of its high degree of fire blight resistance and high quality of fruit.

and high quality of fruit.

Magness was also introduced for trial by USDA, Beltaville, Md. A Seckel seedling was crossed with Comice which gave rise to this oval, medium-sized fruit. Soft flesh is nearly free of stone cells, with a sweet flavor, highly perfumed and aromatic. Lightly russeted skin is relatively tough, being somewhat resistant to insect puncture and decay, At Beltsville, it ripens about September 1, a week later than Bartlett. May be held in cold storage up to 3 months, then ripens with good quality.

Tree is vigorous and spreading for a pear; begins bearing at about 6 years. Pollen-sterile but sets well with all those tested. Very resistant to fire blight. Recommended for general trial because of its high degree of fire blight resistance and high fruit quality.

Moonglew was introduced by USDA, Beltsville.

sistance and high fruit quality.

Monglow was introduced by USDA, Beltaville,
Md., for general trial where fire blight is a
major problem. A cross of Comice x Rec Carlotta
Wurtemburg, the large fruit is attractive, with
flesh rather soft, moderately juicy, nearly free
of grit cells. Flavor is mild, subacid, and has
been rated good. In limited tests it appears
promising for precessing and is of good quality
for fresh use. Ripens at Peltsville in early
August, about 10 to 14 days before Bartlett.
Vigorous tree is very upright and is heavily
spurred.

PECAN

Harris Super originated in Gunnison, Miss., by Edward Harris. Nut resembles Schley, and that variety might have been the staminate parent with Stuart possibly the pistillate one. Pensacola Cluster originated in Pensacols, Fla., by E. W. Moring. A patent is pending, with the sing assigned to Simpson Nursery Co., Monticello, Fla. Nut resembles Van Deman. Tree bears heavily, appears to be disease resistant. Parentage is unknown.

PLUM

Casselman originated with S. T. Casselman of Exeter, Calif., and was introduced in 1959 by Reedley Nursery Inc., Reedley, Calif. Considered to be a bud mutation of Late Santa Rosa. Size and shape of fruit are similar to parent. Skin has more yellow fleeking in its ground color and a lighter red overcolor than its parent, and ripens a few days later than Late Santa Rosa. It has no tendency to crack.

It has no tendency to crack Simka, a patented variety, ler, Calif., by Luke Kazarian yellowish-white flesh, sweet, ture. Freestone at full matt of El Dorado except for the pointed. Skin is ebony. Ripe August 1 in area of Fowler well. Simka resembles Nuthendium, produces regular c, originated in Fowproperty for Fruit is large with
with very firm texprity. Shape is that
the apex being more
ens from July 15 to
pr; ships and stores
bians. Tree size is
crops, is vigorous,
g. medium, produces regula

seedling discovered e of Oakland, Calif. firm, yellow, sweet some 6 to 10 days Sweet Yosemite is a chan 1953 by Franklin B. Rurplish blue skin coversesh. Pit is small. Riper

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RASPBERRY

Boyne is of Canadian origin, produced by Dr. C. R. Ure, Research Branch, Experimental Farm, Morden, Manitoba. Chief x Indian Summer was the cross. Dark red fruit maintains its shape well in handling, even though its texture is tender. Very juicy, aromatic, sprightly with medium acid, being superior to Latham in flavor but not as sweet as Chief. Possesses excellent processing qualities, canned or frozen, and is Boyne resembles.

but not me an additional processing qualities, canned or irosen, good as dessert.

Boyne resembles Trent and Washington. Bush is moderately vigorous, sturdy, winter hardy, very productive. Especially adapted for home gardens, local markets and processing outlets. Shipping quality has not yet been fully determined. Well adapted to southern Manitoba, and tests indicate that it may have a much wider adaptation.

STRAWBERRY

Cascade and Columbia are originations and introductions of Dr. C. D. Schwartze. Western Washington Experiment Station, Puyallup. Cascade is a hybrid resulting from cross Shasta x Northwest, whereas Columbia resulted from Washington selections 157 x 175.

Cascade has a firm texture process and makes a superior quality preserves; partially resistant to fruit rot. Fruit most nearly resembles Northwest. Plant is more tolerant of viruses than is Marshall.

Columbia possesses a good processing quality,

Columbia possesses a good processing quality, is partially resistant to fruit rots, most nearly resembles Northwest. Plant is resistant to the red stele fungus disease and is partially tolerant

resembles Northwest. Plant is resistant to the red stele fungus disease and is partially tolerant to viruses. Northwest. Plant is resistant to the red stele fungus disease and is partially tolerant to viruses. The property of the property

Plants are very high yielding. It bears two German patents.

Trumpeter originated in Excelsior, Minn., by Dr. A. N. Wilcox, Fruit Breeding Farm. Large fruit is very attractive, being rounded-conic to cordate and not necked. Bright red skin covers an intense red flesh which is very firm but succulent, julcy, slightly acid, aromatic, with very good flavor. Freezing quality is superior. Bears in June. Plants are very tall and vigorous, winter hardy, with bright, light green foliage. Apparently highly resistant to root rot, leaf spot, and scorch. Yields are higher than those of Dunlap and Howard 17.

Wisconsin Queen is another origination of Dr. R. H. Roberts, Wisconsin Agricultural Experiment Station, as a selection from original crosses of Corvallis x Premier. The Premier parent used was not identical to Howard 17, according to Dr. Roberts. Medium to large fruit has bright red, attractive skin. Flesh is orange red, has good table and superior freezing qualities. Plant is winter hardy and vigorous; produces few late-season runners. Disease resistance is unknown at present.

WALNUT

Ashley originated in Woodland, Calif., by Pallas Neal Ashley, and is a chance seedling discovered about 1945, A patent is pending; it is to be assigned to Stuke Nursery Co., Gridley, Calif. This English walnut produces a high percentage of kernels having high quality, and most nearly resembling Payne. Tree is early bearing, with fruitfulness on lateral buds amounting to 90% or more. Extremely heavy yielding; starts growth about 4 days after Payne. Sullivan is a Paradox walnut hybrid resulting from a cross of California black walnut (Juglana hindaii) with the English walnut varieties. Resistant to oak-root funcus and root-leaion nematode (Pratylenchas vulnus). Grows vigorously and is propagated by trench layering. Sullivan was originated and introduced by C. E. Sullivan, Yuba City, Calif., who originated the Carmelo and Nugget English walnuts. The END.

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\$98.50. STORY EQUIPMENT, Parkertown, N.J. 1954 FARMALL M AND PLOW, 2500 FIELD crates, 18" produce grader including waxer. ROBERT McCARTNEY, Shreve, Ohio. FOR SALE: No. 40 SPEED SPRAYER, 400 CP-500 CP. Hercules motor driven Model L speed sprayer, \$1000.00, 275 CP, 1.53 T, 1 Ranger 1—PTO, 500 gal. Myers 35 gal. Royal Pump new—used bomber tires. Barrains, 70,000 new crates, Dunkley cherry pitter. CORY ORCHARDS, Cory, Indiana.

1—15000 WATT GENERATOR COMPLETELY automatic like new. \$800.00 cash. ANGELO BERNACCHI GREENHOUSES, INC., South Indiana Avenue, LaPorte, Indiana.

Indiana Avenue, LaPorte, Indiana. BUFFALO TURBINE SPRAYERS. 180 MPH air blast. Stainless steel tank. PTO and engine models. Occasionally reconditioned sprayers. Write for special prices. R. C. MASTON, Trinway, Ohio.

for special prices. R. C. MASTON, Trinway, Ohio.

HAND TRANSPLANTER — SETS VEGETAble and strawberry plants. \$4.95. HOCKER'S,
Grass Lake, Michigan.

RECONDITIONED EQUIPMENT. HARDIE
300 gal. 18 gpm PTO. MYERS 200 gal. 15 gpm,
PTO. HALE 500 gal. BEAN 300 gal. 20 gpm,
PTO with blower. MYERS 200 gal. 7 gpm, PTO.

CASE DO tractor live PTO duo hydraulic. BRILLION pull type rotary shredder. FRANK'S
TRACTOR SALES, Austinburg, Ohio. Crestview
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5-5410.

SALE: FITCHBURG CHIPPER. MAXIMUM cut 4". Perfect, \$425.00. Brand new Tew Market Maker, single bead, automatic bagger. \$425.00. PIEPER'S FRUIT FARM, Brownsville, Wis-

consin.

GET MORE BUSINESS WITH ATTRACTIVE outdoor signs. They're easily made with Signcraft Letters. Permanent. Inexpensive. Proven nation wide. NORTHLAND PRODUCTS, Route 22-282, Rockland 25, Maine.

ONE MYERS 1956—500 GALLON MYERS concentrate sprayer with Chrysler engine. Fine condition. LYND FRUIT FARM, Pataskala, Ohio.

JOHN BEAN SPRAYER PTO 35 GPM, 500 gal steel tank. Will sell reasonable, SOLLER FRUIT FARMS, Zanesville, Obio, Phone GL

2-2318.

1 A. C. MODEL "G" TRACTOR WITH Ariens 6-row Tillivator, 4-row Planet, Ir. seeder, corn planter, plow, mower, vegetable and corn cultivator, will separate. 5 ft. Olson Roto-beater. Badger PTO vegetable topper. 10,000 3/5 bu. hampers. 1 two-tw Holland transplanter. Mounted boom type sprayer to fit I.H.C. Sup. "Attractor. Ariens 6-ft. PTO tiller. Eversman land leveler. Scott-Urschell carrot harvester. '56 Massey Harris "Mustang" tractor with veb. bar and 2-row cultivator. '56 Case "V.A.S." tractor, cultivator and fertilizer attachment. John Bean veg. root crop washer. ALVIN BOUMA, 12850 Westgate Drive, Palos Heights, Ill.

10HN BEAN SPRAYERS, KWH MISTBLOW-ers, Howard Rotavators, Tew and FMC Packing House Equipment. GEORGE ACKERMAN, 2310 Corduroy Rd., Toledo 5, Ohio. Phone Curtice 6-7545.

6-7545.

JOHN BEAN SPEED SPRAYERS, 275-CP, 36, 28T Speedette; Hardie 50 GPM-500, 18 GPM w/blower; Royal 15-300 w/blower; John Bean Potato Harvester, Large Grabill apple Grader, Small Trescott Grader, Friday Wishbasket, pruner. Straw spreader 2300 c.f. Prefab cooler, extra units. MARVIN FAETH SPRAYER & EQUIPMENT CO., Fort Madison, Iowa.

GARDEN SUPPLIES

PROTECT YOUR BERRY CROPS, VEGETA-bles. Cheesecloth 100 yards by 48". Convenient. 10-yard lengths. \$7.50 prepaid, 50% less mill price. JOSEPH HEIN, 120A Eton Road, Thorn-wood, New York.

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9 BREEDS OF GUINEA HATCHING EGGS 20c each postpaid. KINGWOOD, Route 4, Box 285, Tallahassee, Fla.

Strawberry Plants from the country's largest specialists . . . we grow nothing but straw-berries . . . all types . . . all varieties. Our new catalog describes best growing methods . contains many helpful, money-making hints. Write today. It's free. W. F. Allen Co., 105 Pine Street, Salisbury, Md.

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GRAY HAIR LIQUID IMPARTS COLOR TO gray or faded hair \$2.50. Rotor clips unwanted hair in nose and ears \$1.15. Postpaid. FEND-RICK'S, 114 North 6th Street, Allentown, Penna.

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SENSATIONAL NEW LONGER-BURNING SENSATIONAL NEW LONGER-BURNING light bulb. Amazing free replacement guarantee —never again buy light bulbs. No competition Multi-million dollar market yours alone. Make small fortune even spare time. Incredibly quick sales. Free sales kit. MERIATE (Bulb Div.), 114 E, 32nd, Dept. C-74C, New York 16. WANTED: PACKING HOUSE MANAGER for Western Michigan area. Must be able to manage large operation, both packing and cold storage operation. Plant packs 300,000 bushel and is capable of 500,000 bushel of peaches and apples. Must know grading and how to handle help. Salary commensurate with ability. Write AMERICAN FRUIT GROWER, Box 217, Willoughby, Ohio, Give résumé of experience and background.

MISCELLANEOUS

BANANA PLANT, GROWS ANYWHERE—indoors, outdoors. \$1.50. Postpaid. SOPHIA SULEN, Ladylake, Fla.

WRITERS WANTED FOR SPECIAL ARTI-cles, DEPT. 4, 5228 Irvine Avenue, North Holly-wood, Calif.

SUBSCRIBE TO GOVERNMENT SURPLUS weekly, lists all sales. Buy Jeeps, trucks, boats, tents, tires, etc., direct from government. Next 10 issues \$2.00. GOVERNMENT SURPLUS, Paxissues \$2.00 ton, Illinois.

WINE-BEER-ALE RECIPES. FOR HOME use. Send \$1.00 to HOWE, Box 9031, S. Lansing 9, Michigan.

DRESSES 24c; SHOES 39c; MEN'S SUITS \$4.95; trousers \$1.20. Better used clothing. Free catalog. TRANSWORLD, 164-CA Christopher, Brooklyn 12, N. Y.

STRAWBERRY PLANTS—Superb new varieties— Dixieland, Pocahontas, Armore, Empire, Tennesse, Beauty, Best standard kinds—Premier, Catskell, Sparkle, Blakemore, Robinson, Fairiax, Wonderfully productive plants, Berry Book Free, Write today, W. F. Allen Company, 105 Pine Street, Salisbury, Maryland.

OF INTEREST TO WOMEN

SEW APRONS AT HOME FOR STORES. NO charge for material to fill orders. In our fifth successful year. Write: ADCO MFG. CO., Bastrop 63, Louisiana.
HOME TYPING: \$65 WEEK POSSIBLE. DEtails, \$1. TREASURY, 709 Webster, New Rochelle AF-3, N.Y.

HAIR NOW BEING REGROWN BY LOST HAIR NOW BEING REGROWN BY capsule. Research data, methods, booklet on hair, free. BASIC REMEDIES, Dept. FAF-2, Monmouth, Oregon.

MAKE MONEY WEAVING RUGS AT HOME for neighbors on \$89.50 Union Loom. Thousands doing it. Booklet free. UNION LOOM WORKS, Dept. 27, Boonville, N.Y.

ORCHARDS FOR SALE OR LEASE

WITHIN 40 MILES OF DETROIT. 60 ACRE productive orchard. Apples, peaches and plums. Pear orchard and raspberries about ready to bear. Well stocked pond, modern 3-bedroom house, out-Well stocked pond, modern 3-bedroom house, out-buildings. AMERICAN FRUIT GROWER, out-216, Willoughby, Ohio. FOR RENT: LONG-ESTABLISHED 300 ACRE fruit and vegetable farm. fully survived.

FOR RENT: LONG-ESTABLISHED 300 ACRE fruit and vegetable farm, fully equipped, cold storage, good retail business. Due to other interests, owner wishes divest himself of responsibility. Partial financing of production available. Very unusual opportunity for right man. LEWIS W. BARTON, Haddonfield, New Jersey.

61-ACRE APPLE, PEACH, PEAR AND PLUM orchard. On main highway Reading to Harrisburg. Pa. 80 per cent of crop sold at our roadside fruit market. Cold storage plant. Sale due to death of owner. ANNASMEAD ORCHARDS, Robesonia, Pennsylvania.

Pennsylvama.

28. ACRE IRRIGATED FARM. 14-ACRE
Stark dwarf apple trees, balance alfalfa, grain,
With equipment \$22,000. For particulars, write
J. F. SIPES, Socorro, New Mexico.

FOR SALE, 40-ACRE SOUTHWEST MIS-souri orchard, Starks fine varieties, good buildings, wonderful location. Other acreage. AMERICAN FRUIT GROWER, Box 219, Willoughby, Ohio 65 ACRES APPLES, OHIO, EQUIPPED, FIN-est location. Young, Bearing, Bargain, 45 Enfield, ST. LOUIS 32, MISSOURI.

ACRES APPLES, 15 ACRES PEACHES (all good varieties—young orchard)—established roadside market and cider making set up. 400 total acres in farm. SURGEON BROS., Grafton, Ill.

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PRACTICE DAILY BIBLE READING.

PLANTS

ENGLISH ASCENDING OAK (FASTIGIATA) Similar to Poplar in form, Gov't inspected. SCHROEDER ORCHARD AND NURSERY, Growers, Rt. 3, Grand Ledge, Michigan.

RABBITS

RAISE ANGORA, NEW ZEALAND RABBITS on \$500 month plan. Plenty markets. Free WHITE'S RABBITRY, Mt. Vernon, Ohio

SALESMAN WANTED

SERVICE YOUR AREA—AGENTS, DEALers, Farmers make \$125 up weekly distributing nationally advertised Campbell's Gro-Green Liquid and 100% Soluble Crystal Fertilizer Concentrates. No investment. Samples FREE—Ideal proposition for corn and feed men. CAMPBELL CO. (Est. 1928) Rochelle 6, Ill.

SEPTIC TANKS, CESSPOOLS

SEPTIC TANKS, CESSPOOLS, OUTDOOR toilets. Keep clean and odorless with Northel Septic Tank Reactivator. Bacterial concentrate breaks up solids and grease—prevents overflow, backup odors. Regular use saves costly pumping or digging. Simply mix dry powder in water—flush down toilet. Non-poisonous, non-caustic. Simonths supply only \$2.95, postpaid (money-back guarantee of satisfaction), or rush postcard for free details. NORTHEL, FV-3, Box 1103, Minneapolis 40, Minnesota,

SITUATION WANTED

NEED WORKERS?? HARD WORKING farmers and ranchers (men only) from central Mexico want permanent year around jobs in U.S.A. Allow 5 to 6 months for arrival of workers. For free details, write: S. D. CORONA (AFVG), Apartado 184, Guadalajara, Mexico.

MIDDLE AGE MAN WANTS CONNECTIONS in orchard with base plus percentage. Have degree in horticulture and several years orchard experience. Write AMERICAN FRUIT GROWER, Box 218, Willoughby, Ohio.

MAN, 35, MARRIED, 4 CHILDREN, WANTS position in Indiana, Ohio or Michigan. Certificate from horticultural school in Holland specializing fruit growing. 7 years experience Canada. 5 years experience growing Malling root stocks, dwarf apple, budding and grafting. TONY KRUIT-WAGEN, 475 Gardner, Clawson, Michigan.

SPARROW TRAPS

SPARROW TROUBLE? TRAP THE PESTS. Free information. JOHNSON'S, Waverly 12,

STOP FEEDING SPARROWS. MAKE YOUR own trap and catch thousands. Free particulars. ROY VAIL, Antwerp 27, Ohio,

VEGETABLE PLANTS

MARY WASHINGTON ASPARAGUS plants. State inspected, 100 plants \$6.50 postpaid. 2 years old. RUDOLPH SZEWCZYK, Paw Paw, Michigan, Route 3.

years one. NOUDLIPH SZEWCZIK, Faw Faw, Michigan, Route 3.

FREE CATALOG FEATURING OUTSTANDing commercial varieties of tomatoes, sweet and hot peppers, onions, cabbage, broccoli, cauliflower and lettuce. Also hybrid tomatoes, onions, egeplant. Widest selection of vegetable plants for market growers. Our outdoor grown plants are much hardier than hothouse plants and are rushed to you direct from our fields by fast express. Write for information on loading your truck at our packing shed with freshly dug plants. All plants are grown under Georgia Department of Agriculture Certification program from the best seed obtainable. Special quantity prices. Write today for our 55th anniversary catalog. PIEDMONT PLANT COMPANY, Dept. 801, Albany, Georgia.

VINEYARD WANTED

PRODUCTIVE, FAMILY-SIZE GRAPE FARM with additional open acreage if available. Larger type, comfortable home. Lake Erie belt. Pennsyl-vania westward to Cleveland. AMERICAN FRUIT GROWER, Box 220, Willoughby, Ohio

WANTED TO RUY

WANTED: NEW OR USED GRADER AND apple cider press. Write to JOHN WEBEL, 1165 S. Diamond, Mansfield, Ohio.

WILLS

MAKE YOUR WILL! TWO APPROVED Will Forms and simple "Instructions Guide" only \$1.00. NATIONAL, Box 48313P, Los Angeles 48, Galif.

. Fruit for Health .

Needed: Public Relations

IN years past, when agriculture was the dominant occupation in the country, the farmer was in command. He was the dominant population group. He was, in fact, "the public." He did not worry about public opinion. He, himself, was that public opinion.

But things are different today. Times have changed. The farmer finds himself the minority group badly in need of an understanding public. He is no longer that public.

This change has come about so suddenly that some of us do not vet realize what has happened. Other groups have long known that they needed an understanding public opinion and they have worked at the job. The farmer now finds himself a novice in a most complicated field, namely, that of public relations.

Yes, of all the things we could do

in agriculture and the fruit industry to help ourselves, one of the best would be a public relations bureau that worked constantly at the job of educating the public and straightening out a lot of misconceptions. Perhaps the much discussed "Harvest of Shame" television program would not have appeared if a good public rela-tions bureau had been on the job. There are so many things like this that need attention.

If some of the funds for promotion of fruit products from all the groups, large and small, all over the country, were pooled; and if a public relations bureau were set up to keep the public constantly informed on matters concerning the fruit industry, what a job it could do.

This is what we need. Will somebody take the lead?

Fruit Talk

A starling control program is being launched in central Washington state by the United States government in cooperation with other groups in the state to discover effective methods of destroying the birds, preparatory to an intensive starling eradication program for the winter of 1962.

Rereading Dr. Roy Marshall's book, Cherries and Cherry Products, renews our satisfaction with the most complete and most readable book on the cherry that has yet been published.

The old grape vine at Hampton Court Palace, near London, is worth a visit to see—planted in 1768, in the reign of King George III, having a main stem 4 feet in girth, branches which cover 2200 square feet, three limbs 90, 80, and 82 feet long, respectively, maturing 1200 to 2000 clusters of grapes each year, weighing about 600 to 1000 pounds.

India raises 75,000 tons of cashews, and imports 117,000 more from Africa; after which the United States receives 1 mil-lion cases (50-pound) of the total Indian export of 1.5 million cases.

The Central Horticultural Committee National Farmers' Union of Great Britain has undertaken an extensive program in the re-evaluation of the different segments of the horticultural industry "to bring about some measure of stability and to restore confidence in the future," even to the possibility of "controlling acreages and outputs."

From studies with ornamental plants by Williamson of Cornell University it is concluded that "we can look forward to a time when nematode infected plants can be 'cured'" in the field.

"In the long run," says Ray Klackle of Michigan, "quality wins out over price."

Holland continues to report successfully on the mixing of milk and liquid fruit, followed by pasteurization, with no precipitation-now done on an industrial

Not only are subsidies to horticultural Not only are subsidies to horticultural labor not economic, but they are "thor-oughly immoral," says an English cor-respondent, who adds, "if the industry cannot stand on its own feet and pay proper wages, it ought to get out of busi-ness and the sooner the better!"

The California Freestone Peach Association suggests that there will be substantial acreage of trees removed this winter, mostly regular Elbertas.

The large hood-like structures over the doors of some low-temperature cold storages are to provide a curtain of air across the entrance when the door is left open, thus preventing the warmer outside air from entering when truck loads of products are passing in or out. -H.B.T.

Setting the Record Straight

MIGRANT housing is a much discussed topic these days. The inference has been that migrant labor has not been receiving its just quota of consideration. To set the record straight, we cite the legislation that is being proposed in Ohio as a result of a year's study by a state legislative committee.

New state authority over health and sanitation of migrant farm labor camps is the first proposal. The state health department licenses migrant labor camps but has virtually no control over enforcement of health and housing regulations. One new power suggested by the committee might enable the state to initiate suits against delinquent camp operators.

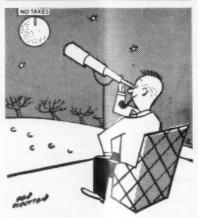
Other recommendations include reimbursing local school districts for education of migrant children and a more liberal interpretation of restrictions covering the current appropriations. The committee also endorsed an overnight rest camp in the Toledo area as a meeting place for migrants arriving in the state.

It asked Congress to consider licensing crew leaders, adoption of minimum wages, and amendment of social security regulations for coverage of migrants who fail to qualify under the present act. The Department of Public Welfare was asked

to study expenditures of emergency funds by local welfare agencies to see whether needs are being met. The Department of Highway Safety was asked to consider the need for regulation of vehicles to transport migrants within the state.

Ohio is one of the few states providing workmen's compensation coverage to migrants, the committee pointed out.

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"It will never occur in our age."

Coming Next Month

- Harvest of Perpetual Crisis in California's Clingstone Deal
 A Grower's Version of Hardy Apple Stocks
- A Bright Future for Muscadine Grapes
- in Georgia
 Liming Helps Pecans

EASIER GOING FOR YOU AND THE LOAD LONGER LIFE FOR THE TRUCK!

REAR CORVAIR 95'S With no axles to transmit road shock, and close to 50-50 weight distribution, a rear-engine Corvair

95 walks right over rough terrain, holds firm and steady on the highway. Its one-piece body-frame design means it'll hold up during a life of hard work, too. Drive one.



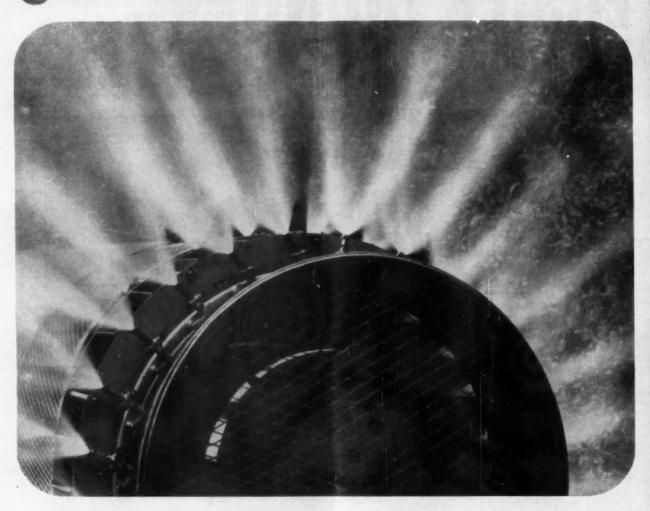


PROVED CHEVROLETS

A few minutes behind the wheel and you can feel why drivers are happier and loads are better protected. But the biggest advantage of all is that the truck itself (sheet metal, tires, chassis) takes less abuse. With

of all is that the truck itself (sheet metal, tires, chassis) takes less abuse. With INDEPENDENT FRONT SUSPENSION (I.F.S.) soaking up road shock and vibration, the truck lasts longer, goes extra thousands of miles before trade-in. Drive one of these, too. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CAPTAN SPRAYS GIVE YOU



3-WAY SCAB CONTROL plus

Pre-bloom to harvest, nothing beats captan fungicide for apple scab and summer disease control.

The reason is simple. Applied before an infection period, captan protects fruit and foliage from infection. Applied shortly after infection occurs, it kills the scab fungus. And applied when scab spots first appear, it inactivates the spots and prevents further infection. This three-way action is one reason why captan is the most widely used apple fungicide.

But there is a big added plus. Growers who have used Stauffer Captan 50-W all season long find that scab control becomes easier each succeeding year because less scab overwinters. As a result,

many growers get good control with as little

as one pound of captan per hundred gallons of water.

What's more, Stauffer Captan and MAGNETIC® "70" Sulfur Paste (or Stauffer MAGNETIC "95" Wettable Sulfur) team up to control scab and powdery mildew in pre-bloom and blossom sprays on apples. The same combination is safe and effective in blossom, petal fall, shuck and cover sprays on peaches.

Nothing beats Stauffer Captan, the all-season quality fungicide that pays off big at harvest . . . on apples, peaches,

cherries, grapes, pears, plums and berries. See your dealer. Write for new pamphlet.

Stauffer Chemical Company, 380 Madison Avenue, New York 17, New York.



